BOSS RX70 24HP
OPERATORS, MAINTENANCE AND PARTS MANUAL

BOSS® The Difference is Revolutionary™
1761 Genesis Dr LaPorte, IN 46350 (800)635-6587 Fax (219)324-7470

P/N: 307239
11/29/2010 MCM

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Operation & Maintenance Section

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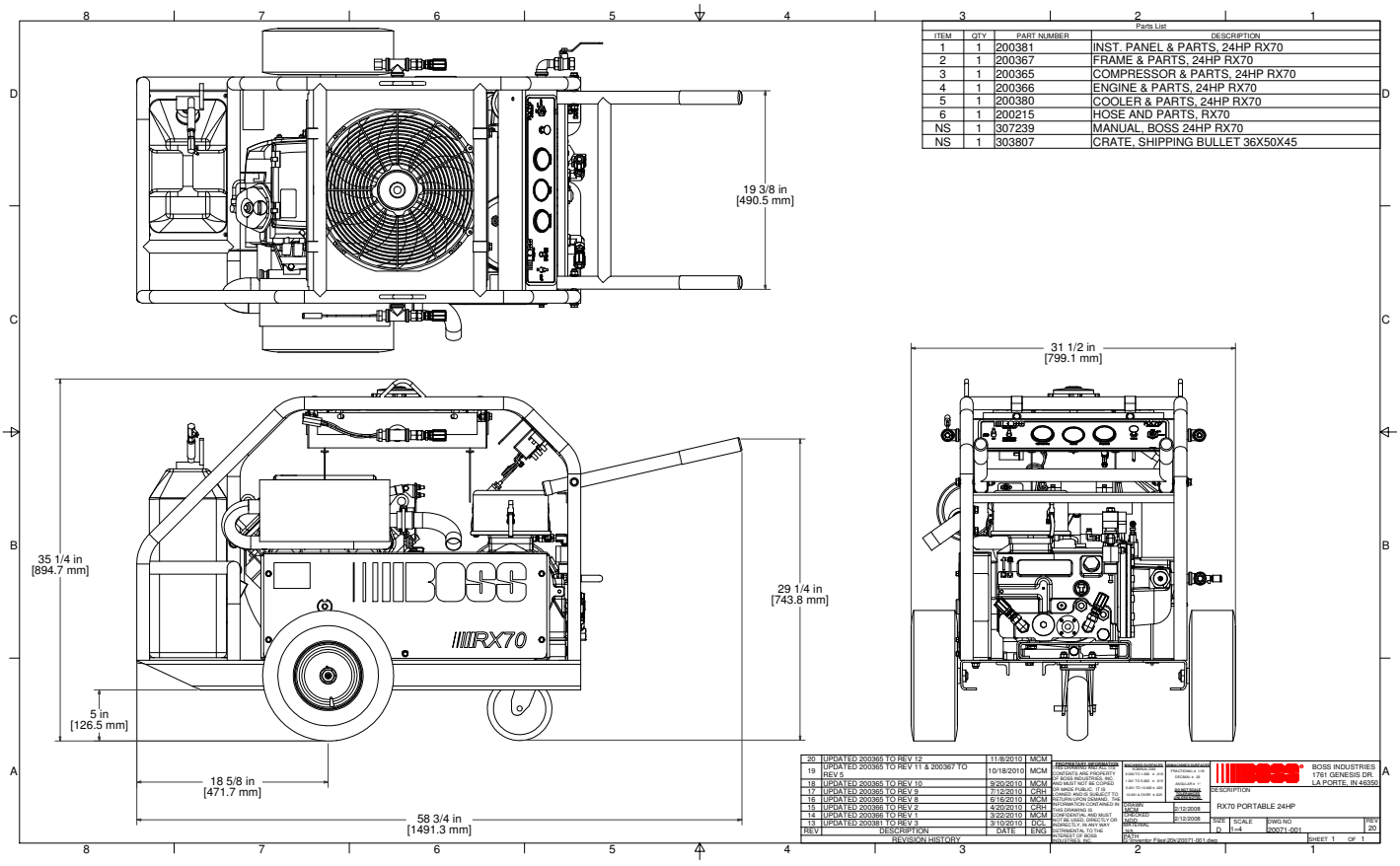
SPECIFICATIONS

COMPRESSOR SPECIFICATIONS		ENGINE SPECIFICATIONS	
MODEL	RX 70	TYPE	HONDA 4-CYCLE, V-TWIN OHV AIR COOLED GASOLINE
DELIVERY (CFM)	70 CFM @ 100 PSIG (1.98M^3/MIN)	MODEL	GX670
OPERATING PRESSURE RANGE	80-115 PSIG	POWER @ 3600 RPM - HP (kw)	24 HP (15.8kw)
AMBIENT OPERATING TEMPERATURE RANGE	-20° TO +105° FAHRENHEIT	DISPLACEMENT - cubic inches (cc)	40.9 cubic inches (670cc)
OIL SUMP CAPACITY	.75 GALLONS (2.83 LITERS)	BORE & STROKE	B - 3.0 (77MM) & S - 2.80 inches (72mm)
TOTAL SYSTEM CAPACITY	1.0 GALLONS (3.80 LITERS)	OIL CAPACITY WITH FILTER	1.69 QUARTS (1.6 LITERS)
AIR SERVICE CONNECTIONS	1/2" NPT	BATTERY	12V - 227cca @ O° FAHRENHEIT
TYPE COOLING SYSTEM	OIL TO AIR	FUEL TANK CAPACITY	5.2 GALLONS (20 LITERS)
AIR INTAKE FILTER	SINGLE STAGE DRY		
TYPE OF CONTROL	0 - 100% DEMAND		

WEIGHT 430lbs (195kg)


Parts List
ITEM QTY PART NUMBER DESCRIPTION
1 1 200381 INST. PANEL & PARTS, 24HP RX70
2 1 200367 FRAME & PARTS, 24HP RX70
3 1 200365 COMPRESSOR & PARTS, 24HP RX70
4 1 200366 ENGINE & PARTS, 24HP RX70
5 1 200380 COOLER & PARTS, 24HP RX70
6 1 200215 HOSE AND PARTS, RX70
NS 1 307239 MANUAL, BOSS 24HP RX70
NS 1 303807 CRATE, SHIPPING BULLET 36X50X45
19 3/8 in [490.5 mm]
31 1/2 in [799.1 mm]
35 1/4 in [894.7 mm]
29 1/4 in [743.8 mm]
5 in [126.5 mm]
18 5/8 in [471.7 mm]
58 3/4 in [1491.3 mm]
RX70
REVISION HISTORY
20 UPDATED 200365 TO REV 12 11/8/2010 MCM
19 UPDATED 200365 TO REV 11 & 200367 TO REV 5 10/18/2010 MCM
18 UPDATED 200365 TO REV 10 9/20/2010 MCM
17 UPDATED 200365 TO REV 9 7/12/2010 CRH
16 UPDATED 200365 TO REV 8 6/16/2010 MCM
15 UPDATED 200366 TO REV 2 4/20/2010 CRH
14 UPDATED 200366 TO REV 1 3/22/2010 MCM
13 UPDATED 200381 TO REV 3 3/10/2010 DCL
REV DESCRIPTION DATE ENG
BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350
DESCRIPTION:
RX70 PORTABLE 24HP
SIZE D SCALE 1=4 DWG NO 20071-001 REV 20
SHEET 1 OF 1

SAFETY

WARNING

ALL UNITS ARE SHIPPED WITH A DETAILED OPERATORS, INSTALLATIONS AND PARTS MANUAL. THIS MANUAL CONTAINS VITAL INFORMATION FOR SAFE AND EFFICIENT OPERATION OF THIS UNIT. CAREFULLY READ THE OPERATORS MANUAL BEFORE STARTING THE UNIT. FAILURE TO READ AND COMPREHEND THE INSTRUCTIONS COULD RESULT IN SERIOUS BODILY INJURY OR PROPERTY DAMAGE.

GENERAL

The compressor is designed and manufactured to operate with relative safety. However, the responsibility for safe operation rests with those who use and maintain these products. The following safety precautions are offered as a guide, which, if conscientiously followed, will minimize the possibility of accidents throughout the useful life of this equipment.

Only those who have read and understand this operator's manual should operate this air compressor. Failure to follow the instructions, procedures and safety precautions in this manual may increase the possibility of accidents and injuries.

Never start this air compressor unless it is safe to do so. Do not attempt to operate the air compressor with a known unsafe condition. Tag the air compressor and render it inoperative by disconnecting the battery so others who may not know of the unsafe condition will not attempt to operate it until the unsafe condition is corrected.

Use and operate this air compressor only in full compliance with all pertinent OSHA requirements and all pertinent Federal, State and Local codes or requirements.

Do not modify this compressor except with written factory approval. Any unauthorized modification automatically voids the factory warranty.

The operation of engine-powered equipment will always be somewhat dangerous. Do not consider this section to be complete, but always continue to be alert for hazards.

PARKING OR LOCATING COMPRESSOR

Locate compressor on level areas, if possible. If not, locate compressor across grade, so the compressor does not tend to roll down hill. Do not locate compressor on grades exceeding 15 degrees (27%).

Make sure compressor is parked or located on a firm surface that can support its weight.

Locate compressor so the wind, if any, tends to carry the engine exhaust fumes and radiator heat away from the compressor air inlet openings and also where the compressor will not be exposed to excessive dust from the work site. Muffler side of package must have 12 inches of clearance so engine-cooling air can escape from package without restriction or re-circulation. The topside of package at the compressor oil cooling fan must also have 12 inches of clearance so cooling air can escape from package without restriction or re-circulation.

Block or chock both sides of all wheels.

SAFETY

PRESSURE RELEASE

Install the appropriate flow limiting valves between the compressor service air outlet and the shut-off (throttle) valve. Air hoses exceeding 1/4" inside diameter are to be connected to the shut-off (throttle) valve to reduce pressure in case of hose or connection failure, per OSHA Standard 29 CFR 1926.302 (as) (7).

When the hose is to be used to supply a manifold, install an additional appropriate flow limiting valve between the manifold and each air hose exceeding 1/4" inside the diameter that is to be connected to the manifold to reduce pressure in case of hose failure.

Provide a flow-limiting valve every 75 feet of hose in runs of air hose exceeding 1/4" inside diameter to reduce pressure in case of hose failure.

Flow limiting valves are listed by pipe size and rated CFM. Select appropriate valves accordingly.

Do not use tools that are rated below the maximum relief valve rating on this compressor. Select tools, air hoses, pipes, valves, filters and fittings accordingly. Do not exceed manufacturer's rated safe operating pressures for these items.

Secure all hose connections by wire, chain or other suitable retaining devices to prevent tools or hose ends from being accidentally disconnected and expelled.

Open compressor oil filler cap only when compressor is not running and is not pressurized. Shut down the compressor and bleed the sump (open service valve) pressure to zero before removing the oil filler cap.

Vent all internal pressure prior to opening any line, fitting, hose, valve, drain plug, connection or other components such as filters or line oilier, and before attempting to refill optional air line anti-ice systems with antifreeze compound.

Keep personnel out of line with and away from the discharge opening of hoses or tools or other points of compressed air discharge.

Do not use air pressures higher than 30 PSIG (207kPa) for cleaning purposes, and then only with effective chip guarding and personal protective equipment per OSHA Standard 29 CFR 1910.242 (b).

Do not play with air hoses, as serious injury or death may result.

SAFETY

FIRE AND EXPLOSION

Refuel at a service station or from a fuel tank designed for its intended purpose. If this is not possible then, ground the machine to the dispenser prior to refueling.

Immediately clean up any spills or leaking fuel, battery electrolyte, oil or antifreeze solution.

Shut off the air compressor and allow it to cool. Then keep sparks, flames and other sources of ignition away and do not permit smoking in the vicinity when adding fuel, when checking or adding electrolyte to batteries, when checking or adding oil, or when refilling air line anti-ice systems with antifreeze compound.

Do not permit liquids, including air line anti-ice system antifreeze compound or oil film to accumulate on bottom covers or on, under or around any external or internal surfaces of the air compressor. Wipe down using an industrial cleaner or steam clean as required. Do not use flammable solvents for cleaning purposes.

Disconnect the ground (negative) battery connection prior to attempting any repairs or cleaning inside the enclosure. Tag the battery connection so others will not unexpectedly reconnect it.

Keep electrical wiring, including the battery terminals and other terminals, in good condition. Replace any wiring that has cracked, cut, abraded, or otherwise degraded insulation; or terminals that are worn, discolored or corroded. Keep all terminals clean and tight.

Turn off battery charger before making or breaking connections to the battery.

Keep grounded conductive objects such as tools away from exposed live electrical parts such as terminals, to avoid arcing, which might serve as a source of ignition.

Replace damaged fuel tanks or lines immediately, rather than attempting to repair them. Do not store or attempt to operate the compressor with any known leaks in the fuel system or any oil lines.

Remove any other material that may be damaged by heat or that may support combustion, including anti-ice system components containing antifreeze compound, prior to attempting weld repairs.

Keep a suitable fully charged class BC or ABC fire extinguisher or extinguishers nearby when servicing and operating the compressor.

Do not store any type of containers with fuel or lubricants inside, or outside of canopy.

Keep oily rags, trash, leaves, litter or other combustibles out of and away from the compressor.

Open all access doors and allow the enclosure to ventilate prior to attempting to start the engine. (Use this time to check the engine and compressor oil levels, etc.)

Do not operate compressor under low overhanging leaves or permit such leaves to contact hot exhaust system surfaces when operating in forested areas.

Do not attempt to use ether as a starting aid in gasoline engines, as serious personal injury or property damage may result.

SAFETY

FIRE AND EXPLOSION (CONT.)
Antifreeze compound used in air line anti-ice systems contains methanol, which if flammable. Use systems and refill with compound only in well-ventilated areas away from heat, open flames, or sparks. Do not expose any part of these systems or the antifreeze compound to the temperatures above 150 degrees F (65 degrees C). Vapors from the antifreeze compound are heavier than air. Do not store compound or discharge treaded air in confined or unventilated area. Do not store containers or antifreeze compound in direct sunlight.

MOVING PARTS
Keep hands, arms and other parts of the body and also clothing away from belts pulleys and other moving parts.

Do not attempt to operate the compressor with the fan guard or other guards removed.

Wear snug fitting clothing and confine long hair when working around this compressor, especially when exposed to hot or moving parts inside the enclosure.

Keep access doors closed except when making repairs, adjustments or performing service.

Make sure all personnel are clear of the compressor prior to attempting to start to operate it, or shutting it off.

Shut off engine before adding fuel, oil, lubrications, air line anti-freeze compound, or battery electrolyte.

Disconnect the grounded negative battery connection to prevent accidental engine operation prior to attempting repair or make adjustments. Tag the battery connection so others won't unexpectedly reconnect it. (Use appropriate lockout / tag-out procedures).

Make adjustments only when the engine is shut off. When necessary, make adjustment, and then start engine to check adjustment. If adjustment is incorrect shut off engine, readjust, and then restart engine to recheck adjustment.

SAFETY

HOT SURFACES, SHARP EDGES AND SHARP CORNERS, VACUUM

Avoid bodily contact with hot oil, hot coolant, hot surfaces and sharp edges and corners.

Keep all parts of the body away from all points of air discharge and away from hot exhaust gases.

Wear personal protective equipment, including gloves and head covering when working in, on, or around the compressor.

Keep a first aid kit handy. Seek medical assistance promptly in case of injury. Do not ignore small cuts and burns, as they may lead to infection.

Keep all loose clothing and parts of the body away from engine, compressor, and air filter intakes.

TOXIC AND IRRITATING SUBSTANCES

Do not use air from this compressor for breathing except in full compliance with OSHA Standards 29 CFM 1920 and any other Federal, State or Local Codes or Regulations.

Do not use air line anti-ice systems in air lines supplying respirators or other breathing air utilization equipment, and do not discharge air from these systems in non-ventilated or other confined areas.

Operate the compressor only in open or well-ventilated areas.

If the machine is operated indoors, discharge engine exhaust outdoors, being certain that there are no exhaust system leaks.

Locate this compressor so that exhaust is not apt to be carried towards personnel, air intakes servicing personnel areas, or towards the air intake of this or any other portable or stationary compressor.

TOXIC AND IRRITATING SUBSTANCES (CONT.)

Fuels, oils, coolants, lubricants and battery electrolyte used in this compressor are typical of the industry. Care should be taken to avoid accidental ingestion and/or skin or eye contact. In the event of indigestion, seek medical treatment promptly. Do not induce vomiting if fuel is ingested. Wash with soap and water in the event of skin contact.

Wear an acid resistant apron and a face shield or goggles when servicing the battery. If electrolyte is spilled on skin or clothing, immediately flush with large quantities of water.

If air line anti-ice system antifreeze compound enters the eyes or if fumes irritate the eyes, they should be washed with large quantities of clean water for 15 minutes. A physician, preferably an ophthalmologist, or eye specialist, should be contacted immediately.

The antifreeze compound used in air line anti-ice systems contains methanol and is toxic, harmful or fatal if swallowed. Avoid contact with the skin or eyes and avoid breathing the fumes. Call a physician immediately. expose live parts of the electrical system.

SAFETY

ELECTRICAL SHOCK

Keep the compressor or equipment carrier, compressor hoses, tools and all personnel at least 10 feet from power lines and buried cables.

Keep all parts of the body and any hand-held tools or other conductive objects away from exposed live parts of the electrical system. Maintain dry footing, stand on insulating surfaces and do not contact any other portion of the compressor when making adjustments or repairs to expose live parts of the electrical system.

Attempt repairs only in clean, dry, well lighted and ventilated areas.

LIFTING

This compressor is provided with a lifting bail for routine lifting, loading onto trucks, etc. Compressors to be air lifted by helicopter must not be supported by the lifting bail, but by slings with appropriate spreader bars instead. In any event, lift only in full compliance with OSHA standards 29 CFR 1910 subpart N. Inspect lifting bail and points of attachment for cracked welds, for cracked, bent, corroded or otherwise degraded members, and for loose bolts or nuts prior to lifting.

Make sure entire lifting, rigging and supporting structure has been inspected and is in good condition. Verify the rated capacity is at least the net weight of the compressor plus an additional 10% allowance for the weight of snow, ice, mud or stored tools and equipment. If you are unsure of the weight, then weigh the compressor before lifting.

Make sure lifting hook has a functional safety latch, or equivalent, and is fully engaged once it has been lifted clear of the ground.

Do not attempt to lift in high winds.

Keep all personnel out from under and away from the compressor when suspended.

Lift compressor slowly and smoothly, without jerking.

Lift compressor no higher than necessary.

Keep lift operators in constant attendance whenever compressor is suspended.

Set compressor down only on level surfaces capable of supporting at least its net weight plus an additional 10% allowance for the weight of snow, ice, mud or stored tools and equipment.

Chock both sides of wheels plus stabilizer legs before disengaging the lifting hook.

SAFETY

JUMP STARTING

Observe all safety precautions mentioned elsewhere in this manual.

Batteries may contain and/or generate gases that are flammable and explosive. Keep flames, sparks and other sources of ignition away.

Batteries contain acid that is corrosive. Do not allow battery acid to contact eyes, fabrics, or painted surfaces, as serious personal injury or property damage may result. Flush any contacted areas thoroughly with water immediately. Wear an acid resistant apron and face shield when attempting to jump-start the compressor.

Remove all vent caps from the battery in the compressor. Do not permit dirt or foreign matter to enter the open cells. Do not attempt to open sealed maintenance free batteries.

Check fluid level. If low, bring fluid to proper level before attempting to jump-start.

Do not attempt to jump-start if fluid is frozen or slushy. Bring batteries up to at least 40 degrees F (5 degrees C) before attempting to jump-start.

Cover open cells of all compressor batteries with clean dampened cloths before attempting to jump-start.

Attempt to jump start only with a vehicle with a negative ground electrical system with the same voltage and which is equipped with a battery of comparable size or larger than supplied with the compressor. Do not attempt to jump-start by using motor generator sets, welders, or other sources of DC power, as serious damage may result.

Bring the starting vehicle alongside the compressor, but do not permit metal-to-metal contact between the compressor and the starting vehicle.

Set the parking brakes of the starting vehicle, chock compressor wheels and stabilizer legs on both sides.

* *The use of maintenance-free batteries may eliminate this step.*

Place the starting vehicle in neutral or park, turn off all nonessential accessory electrical loads and start its engine.

Use only jumper cables that are clean, in good condition, and are heavy enough to handle the starting current.

Avoid accidental contact between jumper cable terminal clips or clamps and each other or any metallic portion of either the compressor or the starting vehicle to minimize the possibility of uncontrolled arcing, which might serve as a source of ignition.

Positive battery terminals are usually identified by a plus (+) sign on the terminal and the letters POS adjacent to the terminal. Negative battery terminals are usually identified by a minus (-) sign on the terminal and the letters NEG adjacent to the terminal.

Connect one end of a jumper cable to the positive POS (+) battery terminal in the starting vehicle.

Connect one end of the other jumper cable to the grounded negative (NEG) terminal of the battery in the starting vehicle.

JUMP STARTING (CONT.)

Connect one end of a jumper cable to the positive POS (+) battery terminal in the starting vehicle.

Connect one end of the other jumper cable to the grounded negative (NEG) terminal of the battery in the starting vehicle.

Check you connections. Do not apply 24V to a 12V system in the compressor.

Connect the other end of this same jumper cable to a clean portion of the compressor engine block away from fuel lines, the crank case breather opening, and the battery.

Start the compressor in accordance with normal procedure. Avoid prolonged cranking.

Allow the compressor to warm-up. When the compressor is warm and operating smoothly at normal ideal RPM, disconnect the jumper cable from the engine block on the compressor, then disconnect the other end of this same cable from the grounded negative (NEG) terminal of the battery in the starting vehicle. Then disconnect the other jumper cable from the positive (POS) (+) terminal of the battery in the compressor, and finally, disconnect the other end of this same jumper cable from the positive (POS) (+) terminal of the battery in the starting vehicle.

SAFETY

NOTE

THE OWNER, LEASER, OR OPERATOR OF THE COMPRESSOR IS HEREBY NOTIFIED AND FOREWARNED THAT ANY FAILURE TO OBSERVE THESE SAFETY PRECAUTIONS MAY RESULT IN DAMAGE OR INJURY

NOTE

BOSS INDUSTRIES EXPRESSLY DISCLAIMS RESPONSIBILITY OR LIABILITY FOR ANY INJURY OR DAMAGE CAUSED BY FAILURE TO OBSERVE THESE SPECIFIED PRECAUTIONS OR BY FAILURE TO EXERCISE THAT ORDINARY CAUTION AND DUE CARE REQUIRED WHEN OPERATING OR HANDLING THE COMPRESSOR, EVEN THOUGH NOT EXPRESSLY SPECIFIED ABOVE.

Compliments of warning decals are supplied with each unit. These decals are affixed to the unit after it has been painted, prior to being put into service. The decals are placed so as to be clearly visible to the user and service personnel.

WARNING
Read the operators manual before starting this unit. Failure to adhere to instructions can result in severe personal injury.
Replacement manuals can be purchased from:
Boss Industries, Inc.
1761 Genesis Dr.
LaPorte, IN 46350
300039

P/N: 300039

DANGER
HOT OIL UNDER PRESSURE!
Will cause SEVERE PERSONAL INJURY OR DEATH. Do not remove valves, caps, plugs or piping when compressor is running or pressurized. Shut down compressor and relieve system of all pressure before removing valves, caps, plugs or piping.
300038

P/N: 300038

SAFETY

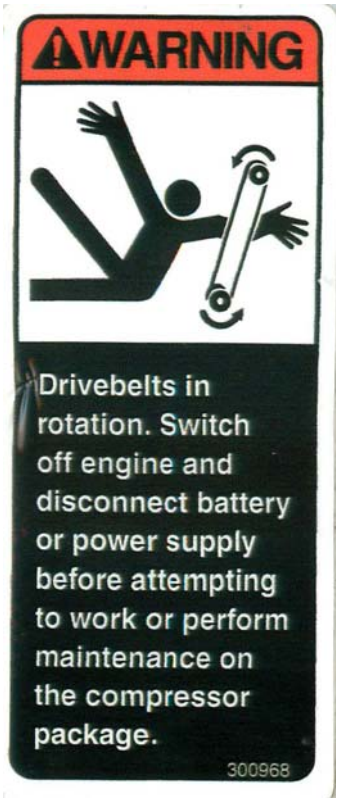
DANGER
Discharge air used for breathing will cause severe injury or death. Consult filtration specialist for additional filtration and treatment equipment to meet occupational safety and health administration standards.
300040

P/N 300040

WARNING
Connect air hoses only in full compliance with OSHA Standard 29 CFR 1926:(b)(7) The required safety devices should be tested in accordance with their manufacturer's recommendations to verify that they reduce pressure in case of hose failure and will not nuisance trip with the hose and tool combinations in use.
300042

P/N 300042

P/N 300041


WARNING
Drivebelts in rotation. Switch off engine and disconnect battery or power supply before attempting to work or perform maintenance on the compressor package.
300968

P/N 300968

DESCRIPTION OF COMPONENTS

POWER UNIT

The power unit used to drive the compressor is a gasoline engine that has been carefully selected for its ability to provide an efficient and reliable source of power. For detailed information on the power unit, refer to the Engine Operator's Manual provided separately.

COMPRESSOR ASSEMBLY

The RX70 compressor assembly is a positive displacement, oil flooded, rotary screw type unit employing one stage of compression to achieve the desired pressure. Components include a housing (stator) two screws (rotors), bearings and bearing supports. The power source drives the male rotor through the inlet housing. The male rotor drives the female rotor.

PRINCIPLES OF OPERATION

In operation, two helical grooved rotors mesh to compress air. Inlet air is trapped as the male lobes roll down the female grooves, pushing trapped air along, compressing it until it reaches the discharge port in the end of the stator and delivers smooth-flowing, pulse-free air to the receiver.

During the compression cycle, oil is injected into the compressor and serves these purposes:

1. Lubricates the rotating parts and bearings.
2. Serves as a cooling agent for the compressed air.
3. Seals the running clearances.

LUBRICATION SYSTEM

Oil from the compressor oil sump, at the compressor discharge pressure, is directed through the oil cooling system, then the oil filter, and back to the compressor stator, where it is injected into the compressor. At the same time oil is directed to the bearings and shaft seal of the compressor.

SAFETY VALVE

The pop safety valve is set at 175 PSI and is located at the top of the air/oil sump. This valve acts as a backup to protect the system from excessive pressure that might result from a malfunction.

AIR/OIL COALESCER

The coalescer is self-contained within a spin-on housing and is separate of the sump. When air is demanded at the service line, it passes through the coalescer, which efficiently provides the final stage of oil separation.

MINIMUM PRESSURE VALVE

The minimum pressure valve is located at the outlet of the compressor and serves to maintain a minimum discharge pressure of 60 PSIG in operation, which is required to assure adequate compressor lubrication pressure, and air/oil separation at the coalescer element.

OIL FILTER

The compressor oil filter is the full-flow replaceable element type and has a safety by-pass built into it. This element screws directly to the compressor stator housing. See Compressor Mounting System in the illustration section.

DESCRIPTION OF COMPONENTS

COMPRESSOR COOLING SYSTEM

The compressor cooling system consists of an oil cooler and electric fan assembly. See Cooler and Parts System in the illustration section.

An automated thermostatic control system maintains a continuous temperature check of the lubricant. The fan sensor trips a normally open relay which sends power to the fan motor once compressor oil temperature reaches 190°F. The fan sensor stops power to the fan motor once the compressor oil temperature drops to 160°F.

INSTRUMENT PANEL AND OPERATING CONTROLS

The instrument panel contains all the necessary gauges and instruments for operation and is located outside of the main enclosure. The following is an explanation of their use. See Electrical System & Wiring Diagram in the illustration section.

1. Start (key)

   The starter switch is used to electrically energize the engine starter motor solenoid to begin cranking of engine.

2. Choke (Gasoline Engine Only)

   The choke is used to provide a richer fuel mixture to the engine for cold starts. Pulling the choke cable out increases the fuel mixture. As the engine warms up, the choke should be pushed inward. The engine should operate without choking as soon as possible after starting to avoid flooding or dilution of lubricating oil.

3. Hourmeter

   The hourmeter records the total number of operating hours. It serves as a guide towards following the recommended inspection and maintenance schedule.

4. Pressure Meter

   The pressure meter displays compressor discharge air pressure. This meter also has a shutdown feature and will shutdown the engine if the discharge air pressure reaches 150 psi.

5. Temperature Meter

   The temperature meter displays compressor discharge air temperature. This meter also has a shutdown feature and will shutdown the engine if the discharge air reaches 250°F.

Note: If the compressor shuts down on high discharge air pressure or high discharge air temperature, find and fix the problem before restarting. Also, the shutdown relay reset button must be reset before the engine can be restarted.

CONTROL SYSTEM

The prime components of the compressor control system include the compressor inlet valve and an air cylinder. The control system is designed to match air supply to air demand and to prevent excessive discharge pressure when compressed air is not being used. Control of air delivery is accomplished by the inlet valve regulation as directed by the discharge pressure regulator.

DESCRIPTION OF COMPONENTS

CONTROL SYSTEM OPERATION

The following discussion explains the operation of the control system from a condition of "no load" to a condition of 'full capacity" at working pressure. For the working pressure range of your machine, refer to applicable data in the specification sections.

The pressure Regulator and engine speed regulating cylinder operates as follows:

1. As the demand for air decreases, the receiver pressure rises; and when this pressure exceeds the set point of the pressure regulator, the regulator opens sending a pressure signal to the inlet valve, and to the regulating cylinder.

    a. The inlet valve disc moves towards the valve inlet against the force of the modulating spring inside the valve. This regulates the opening area of the inlet valve.
    b. The regulating cylinder will reduce engine speed somewhere between full load and compressor idle.

2. If the air demand goes to zero, (service valve closed) the inlet valve will close completely, and the regulating cylinder will bring the engine to compressor idle.

3. As the demand for air increases, receiver pressure drops slightly below the set point of the pressure regulator eliminating the signal to the inlet valve and regulator cylinder.

    a. Inlet valve disc opens fully.
    b. Regulating cylinder retracts allowing the engine governor spring to bring the engine and compressor up to its high rpm.

INLET VALVE

The compressor inlet valve is a piston operated disc valve that has a dual function of regulating the inlet opening to control capacity and serving as a check valve at shutdown.

DISCHARGE PRESSURE REGULATOR VALVE

This valve is used to select the desired discharge pressure within the operating pressure range. Turning the regulator screw clockwise increases the working pressure, a counter-clockwise movement of the screw reduces working pressure. Do not set pressure over 125 psi. Normal set pressure is 80 to 120 psig.

COMPRESSOR DISCHARGE PRESSURE GAUGE

This gauge indicates the discharge air pressure. Operate compressor with discharge pressure within 80 to 120 PSIG.

AUTOMATIC BLOW DOWN VALVE

The automatic blow down valve. This valve will automatically bleed the sump to zero pressure when the compressor is stopped.

DESCRIPTION OF COMPONENTS

ELECTRICAL AND PROTECTIVE CIRCUIT SYSTEM

The compressor electrical system is a 12-volt negative ground type. It is equipped with a protective circuit to minimize damage which could be caused by high compressor discharge temperature, or high discharge pressure. See wiring diagram and electrical system in the illustrations section.

The following conditions will cause automatic shutdown of the compressor:

1. Compressor discharge temperature switch exceeds approximately 250°F.
2. Compressor discharge pressure that exceeds 150 psi.

NOTE

WHENEVER THE OPERATION OF THE PROTECTIVE CIRCUIT SHUTS THE MACHINE OFF, THE RESET BUTTON ON THE CONTROL PANEL MUST BE RESET (PUSHED IN) BEFORE YOU CAN RESTART THE COMPRESSOR. "DO NOT" RESTART THE COMPRESSOR UNTIL THE CAUSE OF THE SHUTDOWN IS FOUND AND FIXED.

DUE TO THE FACT THAT THE COMPRESSOR PROTECTIVE CIRCUIT IS AN "ENERGIZED TO RUN" SYSTEM, ANY INTERRUPTION OF CURRENT WILL SHUT THE UNIT DOWN. IN EVENT OF AUTOMATIC SHUTDOWN, IT IS ALWAYS GOOD POLICY TO CHECK FOR LOOSE OR BROKEN WIRES OR CORRODED CONNECTIONS BY THE SHUTDOWN SWITCH LOCATED IN THE DISCHARGE LINE AT SUMP. IF THE ELECTRICAL SYSTEM CHECKS OUT PROPERLY, REFER TO TROUBLESHOOTING SECTION.

COMPRESSOR OPERATION

GENERAL

Every RX70 compressor has been operated and tested at the factory before shipment. This testing assures that the unit is operating properly and that the compressor will deliver its rated capacity. Regardless of the care taken at the factory, there still exists a possibility that damage may occur during shipment. For this reason, it is recommended that the unit be carefully inspected for evidence of damage in shipment. During the first few hours of operation the machine should be carefully observed for any possible malfunction.

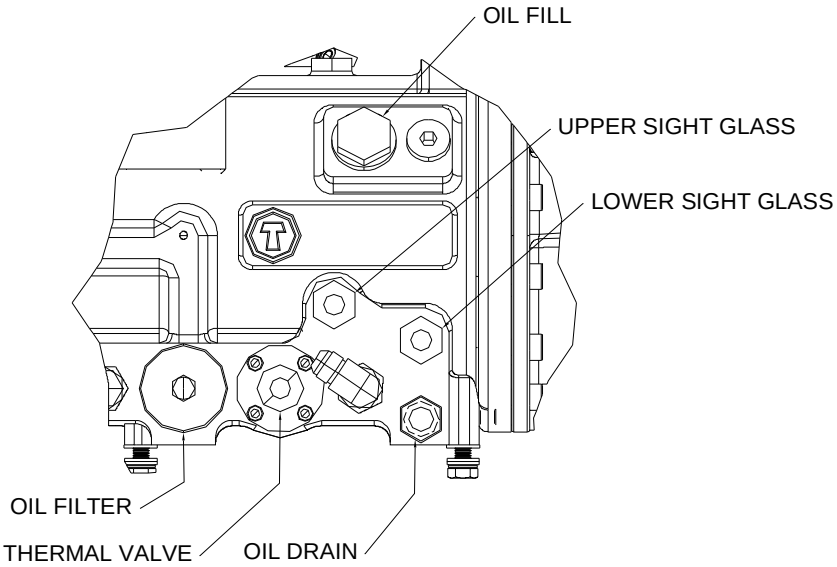
Satisfactory performance of the machine depends on the operator's knowledge of the controls, instruments, and recommended operating procedures. Consequently, the preceding sections of this manual should be read and understood before attempting to start and operate this machine.

PREPARATION FOR INITIAL START-UP

Inspect the compressor, engine, and other assemblies for loose connections or damage occurring during shipment. Position the compressor package on a level surface so the proper amounts of fluids can be added. Check the engine crankcase oil level. If required, add oil as recommended in the Engine Operator's manual. Fill fuel tank with grade of fuel recommended in the Engine Operator's manual. Connect negative battery cable to (-) battery terminal. Check the compressor oil sump level. If oil level is low, add ATF Dexron III. See below for fill plug and sight glass locations. DO NOT OVER FILL.

NOTE

PROPER COMPRESSOR OIL LEVEL SHOULD FILL HALF OF THE UPPER SIGHTGLASS WHEN THE COMPRESSOR IS LEVEL AND THE COMPRESSOR IS NOT RUNNING .



COMPRESSOR OPERATION

NORMAL STARTING - GASOLINE ENGINE

1. Inspect the compressor, engine, and other assemblies for loose connections or damage that might have occurred since the last operation.
2. Check engine oil and fluid levels.
3. Check compressor oil sump level.
4. Ensure service valves are closed.
5. Verify cold start switch is in the "ON" position.
6. Pull the choke out as required, but avoid flooding the engine. Release the choke as soon after starting as possible.
7. Turn engine start switch and hold until engine starts, but do not hold any longer than 10 seconds at a time.
8. Let the machine run for 3-5 minutes to allow the engine to warm-up.
9. Toggle the cold start switch to the "OFF" position. The system is now ready for full-load operation.
10. Service valves can now be opened.

NOTE

IF ENGINE SHOULD STOP, DO NOT ATTEMPT TO RESTART WITH THE OIL SUMP UNDER PRESSURE, ALLOW BLOW DOWN OF SUMP TO END. REPEAT THE ABOVE PROCEDURE FROM STEP 3.

NORMAL STOPPING

1. Close the service valves.
2. Toggle cold start switch to the "ON" position.
3. Let the compressor run for a few minutes to allow machine to cool down an for system pressure to unload.
4. Turn key to

OPERATING UNDER EXTREME CONDITIONS

When operating the compressor in extreme conditions, perform the following service functions as applicable.

COLD WEATHER OPERATION

When operating in lower than -20 degrees F ambient, change engine oil per engine owner's manual and let the engine and compressor warm-up before opening the service valve.

HOT WEATHER OPERATION

Keep the engine filled with clean oil and check the oil level more frequently than usual. Keep the outside of the compressor oil cooler clean. Locate the unit in a well-ventilated area. When operating in humid conditions, it is recommended that the compressor oil change interval be shortened.

DUSTY OR SANDY AREAS

When possible, wet down the area surrounding the operating site to keep dust and blowing sand to a minimum. Inspect air filters more frequently.

COMPRESSOR OPERATION

WARNING

CHECK THE COMPRESSOR SUMP OIL LEVEL ONLY WHEN THE COMPRESSOR IS NOT OPERATING AND SYSTEM IS COMPLETELY RELIEVED OF PRESSURE. OPEN SERVICE VALVE TO ENSURE RELIEF OF SYSTEM AIR PRESSURE WHEN PERFORMING MAINTENANCE ON COMPRESSOR AIR/OIL SYSTEM. FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE PROPERTY DAMAGE AND SERIOUS BODILY HARM OR DEATH.

OPERATING CONDITIONS

For maximum compressor performance, the compressor should be as close to level as possible when operating. The compressor will operate on a 15-degree sideward lengthwise tilt without any adverse problems. Fluid carryover and oil starvation may occur if operated beyond this tilt.

NOTE

IF THE COMPRESSOR IS BEING USED TO POWER SANDBLASTING EQUIPMENT OR AN AIR TANK, USE A CHECK VALVE DIRECTLY AFTER THE SERVICE VALVE TO PREVENT BACK-FLOW INTO THE SUMP. THIS CHECK VALVE SHOULD HAVE A MAXIMUM PRESSURE DROP RATING OF 2 PSIG (13.78 kPa) OPERATING AND A CAPACITY RATING EQUAL TO THE MAXIMUM RATING OF THE COMPRESSOR.

OPERATING SUGGESTIONS

Replace any faulty gauge immediately.

Allow at least ten feet of unobstructed area in front of the engine muffler to assure good airflow. Do not place items under the package.

Check instruments periodically during operation. If not in normal operating zone, refer to Section 6, “Trouble-shooting”.

Make sure that correct type and viscosity lubricating oils and fuel are used, especially in extreme ambient temperatures.

Keep batteries fully charged and properly maintained.

Keep control linkage clean and lightly lubricated.

COMPRESSOR OPERATION

While BOSS Industries has built into its compressor several controls and indicators to assure you that it is running properly, you will want to recognize and interpret the readings which will call for service or indicate the beginning of a malfunction. Before starting the compressor, read this section thoroughly. Familiarize yourself with the controls and indicators, their purpose, location, and use.

CONTROL OR INDICATOR	PURPOSE
AIR PRESSURE GAUGE	Continually monitors the sump pressure at various load and unload conditions
FAN SWITCH	Monitors the temperature of the air/fluid mixture leaving the compressor unit. The normal reading should be approximately 140 to 220° Fahrenheit. Switch closes to activate fan motor.
COMPRESSOR HIGH DISCHARGE TEMPERATURE SHUTDOWN SWITCH	Opens the electrical circuit to shut the machine down when the discharge temperature reaches 250° Fahrenheit.
FLUID LEVEL SIGHTGLASS	Indicates the fluid level in sump. Proper level should fill half of the top sight glass. Check this level when the machine is shutdown.
PRESSURE RELIEF VALVE	Vents sump pressure to the atmosphere should pressure inside the sump exceed 175 PSIG.
COMPRESSOR INLET CONTROL VALVE	Regulates the amount of air intake in accordance with the amount of compressed air being used. Isolates fluid in compressor unit on shutdown.
PRESSURE REGULATING VALVE	Senses air pressure from sump to provide automatic regulation of the compressor inlet control valve and load controller.
MINIMUM PRESSURE VALVE	Restricts airflow to balance sump and service air pressure. Assures a minimum of 60 PSIG to the service line.

COMPRESSOR INSPECTION, LUBRICATION, AND MAINTENANCE

This section contains instructions for performing the inspection, lubrication and maintenance procedures required in maintaining the compressor in proper operating condition. The importance of performing the maintenance described herein cannot be over emphasized.

Periodic maintenance procedures to be performed on the equipment covered by this manual are listed below. It should be understood that the intervals between inspections specified are maximum intervals. More frequent inspections should be made if the unit is operating in a dusty environment, in high ambient temperature, or in other unusual conditions. A planned program of periodic inspection and maintenance will help to avoid premature failure and costly repairs. Daily visual inspections should become a routine.

The LUBRICATION AND MAINTENANCE CHART lists serviceable items on this compressor package. The items are listed according to their frequency of maintenance, followed by those items which need only "As Required" maintenance. The maintenance time intervals are expressed in hours. Use the hourmeter readings for determining your maintenance schedules. Perform the maintenance at multiple intervals of the hours shown. For example, when the hourmeter shows "100" on the dial, all items listed under "EVERY 10 HOURS" should be serviced now for the tenth time, and all items under "EVERY 50 HOURS" should be served for the second time. In addition to the following LUBRICATION AND MAINTENANCE CHART refer to the Engine Operator's manual for recommended engine lubrication and maintenance.

DANGER

COMPRESSOR MUST BE SHUT DOWN AND COMPLETELY RELIEVED OF PRESSURE PRIOR TO CHECKING FLUID LEVELS. OPEN SERVICE VALVE TO ASSURE RELIEF OF SYSTEM AIR PRESSURE. FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

COMPRESSOR INSPECTION, LUBRICATION, AND MAINTENANCE CHART

INTERVAL	ACTION
EVERY 10 HOURS OR DAILY	1. Check compressors oil level.
	2. Check air filter.
	3. Check for oil and air leaks.
	4. Check fuel supply after running.
	5. Check for fuel, oil and compressor fluid leaks.
EVERY 50 HOURS OR WEEKLY	1. Drain water from compressor oil at sump.
	2. Check belt tension.
	3. Drain water and sediment from fuel tank.
EVERY 500 HOURS OR 6 MONTHS	1. Change compressor oil and oil filter.
	2. Check air filter piping, fittings and clamps.
	3. Install new air filter element. (Shorter interval may be necessary under dusty conditions).
	4. Check tire pressure.
	5. Check for excessive wear on drive belts. Replace if necessary.
EVERY 1000 HOURS OR 1 YEAR	1. Check safety circuit switches.
	2. Clean battery terminals.
	3. Check compressor shaft seal for leakage.
EVERY 2000 HOURS OR 1 YEAR	1. Install new air filter element. (Shorter interval may be necessary under dusty conditions).
PERIODICALLY OR AS REQUIRED	1. Inspect air filter element
	2. Replace spin-on coalescer element if necessary.
	3. Inspect and clean compressor oil system cooler, etc.
	4. Check engine speed control adjustment, at hi-low compressor settings.
	5. Inspect lifting frame (before each lift).
	6. Grease wheel bearings
	7. Check engine and compressor supports.

NOTE: See Maintenance Section for clarification on above.

COMPRESSOR INSPECTION, LUBRICATION, AND MAINTENANCE

NOTE

OBSERVE ALL GAUGE READINGS. NOTE ANY CHANGE FROM THE NORMAL READING AND DETERMINE THE CAUSE. HAVE NECESSARY REPAIRS MADE. "NORMAL" IS THE USUAL GAUGE READING WHEN OPERATING AT SIMILAR CONDITIONS ON A DAY-TO-DAY OPERATION.

FIRST COMPRESSOR OIL AND OIL FILTER ELEMENT CHANGE SHOULD BE MADE AT 50 HOURS. ALSO, MORE FREQUENT OIL CHANGES WILL BE REQUIRED UNDER EXTREME OPERATING CONDITIONS OF EXTREMELY HIGH OR LOW TEMPERATURES, AND HIGH HUMIDITY.

CHANGE OIL EVERY SIX MONTHS, EVEN IF THE NORMAL OIL CHANGE PERIOD, IN HOURS, HAS NOT YET ELAPSED.

ALWAYS WARM UP THOROUGHLY PRIOR TO CHANGING EITHER THE ENGINE OIL OR THE COMPRESSOR OIL.

DO NOT OPEN COMPRESSOR OIL DRAIN; OIL FILTER CAP, OR OIL FILTER UNTIL ALL PRESSURE HAS BEEN RELIEVED. CHECK BY MANUALLY OPENING THE ASME SUMP PRESSURE RELIEF VALVE.

LUBRICATION

LUBRICANT RECOMMENDATIONS

WARNING

IT IS IMPORTANT THAT THE COMPRESSOR FLUID BE OF A RECOMMENDED TYPE AND THAT THIS OIL AS WELL AS THE AIR FILTER, OIL FILTER AND SEPARATOR ELEMENTS BE INSPECTED AND REPLACED AS STATED IN THIS MANUAL.

THE COMBINATION OF A SEPARATOR ELEMENT LOADED WITH DIRT AND OXIDIZED OIL PRODUCTS TOGETHER WITH INCREASED AIR VELOCITY AS A RESULT OF THIS CLOGGED CONDITION MAY PRODUCE A CRITICAL POINT WHILE THE MACHINE IS IN OPERATION WHERE IGNITION CAN TAKE PLACE AND COULD CAUSE A FIRE IN THE OIL SUMP.

FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

The following general characteristics categorize lubricants that have been found to be satisfactory for use in helical screw type air compressors. Due to the impossibility of establishing limits on all physical and chemical properties of lubricants which can affect their performance in the compressor over a broad range of environmental influences, the responsibility for recommending and consistently furnishing a suitable heavy-duty lubricant must rest with the individual supplier. The lubricant supplier's recommendation must, therefore, be based upon not only the following general characteristics, but also upon his own knowledge of the suitability of the recommended lubricant in helical screw type air compressors operating in the particular environment involved.

CAUTION

MIXING DIFFERENT TYPES OF BRANDS OF LUBRICANTS IS NOT RECOMMENDED DUE TO THE POSSIBILITY OF A DILUTION OF THE ADDITIVES OR A REACTION BETWEEN ADDITIVES OF DIFFERENT TYPES.

LUBRICATION

APPLICATION GUIDE

Not all lubricating oils are suitable for rotary screw compressor use. The most satisfactory oils are the non-detergent types that contain high levels of corrosion, oxidation, and foam inhibitors.

Your RX70 compressor is factory filled with Dexron® III ATF. Other non-detergent motor oils, SAE 10W, class SE or CD, and SAE 30 that meet the requirements below can be used. However, BOSS recomends you to use Dexron® III ATF.

The viscosity of the oil chosen depends largely on the ambient operating temperature range. The oil must provide sufficient lubrication for bearings and rotors at operating temperature, and it must have a pour point low enough to provide fluidity at low starting temperatures. In general, the viscosity range represented by these SAE grades is satisfactory for the temperature range shown:

+40° F to 120° F SAE 30
-10° F to 75° F SAE 10 W (-20° F Pour Point)
-40° F to 100° F Auto Trans. Fluid (-50° F Pour Point)

PRIME LUBRICANT CHARACTERISTICS

1. Flash point 400° F minimum (ASTM D-92 — COC).
2. Pour point must be at least 20° F lower than the lowest expected ambient temperature.
3. Contain rust and oxidation inhibitors.
4. Contain foam suppressers.

SYNTHETIC DIESTER AND SYNTHESIZED HYDROCARBON LUBRICANTS OIL

All elastomeric components and all metal used in the compressor are fully compatible with synthetic diester and synthesized hydrocarbon lubricants. The viscosity grade chosen for synthetic diester base or SHC lubricants should be based upon the suggested viscosity ranges listed under prime lubricant characteristics and the lubricant supplier.

LUBRICATION

NOTE

UNKNOWN INFLUENCES OF ENVIRONMENTAL FACTORS SUCH AS THE INTAKE OF REACTIVE GASES OR VAPORS IN THE AIR MAY LEAD TO CHEMICAL CHANGES IN ANY OIL. CAUSING PREMATURE FAILURE OF THE LUBRICANT AND THE USEFUL LIFE OF ALL "EXTENDED LIFE" LUBRICANTS MAY BE SHORTER THAN QUOTED BY THE LUBRICANT SUPPLIER. BECAUSE THE NORMAL "DRAIN AND REPLACE" PERIOD MAY BE EXCEEDED USING SYNTHETIC LUBRICANTS, DIFFERING FROM THOSE SPECIFIED IN THIS MANUAL, BOSS ENCOURAGES THE USER TO CLOSELY MONITOR THE LUBRICANT CONDITION AND TO PARTICIPATE IN AN OIL ANALYSIS PROGRAM WITH THE SUPPLIER.

NOTE

NO LUBRICANT, HOWEVER GOOD AND/OR EXPENSIVE, CAN REPLACE PROPER MAINTENANCE AND ATTENTION. SELECT AND USE IT WISELY.

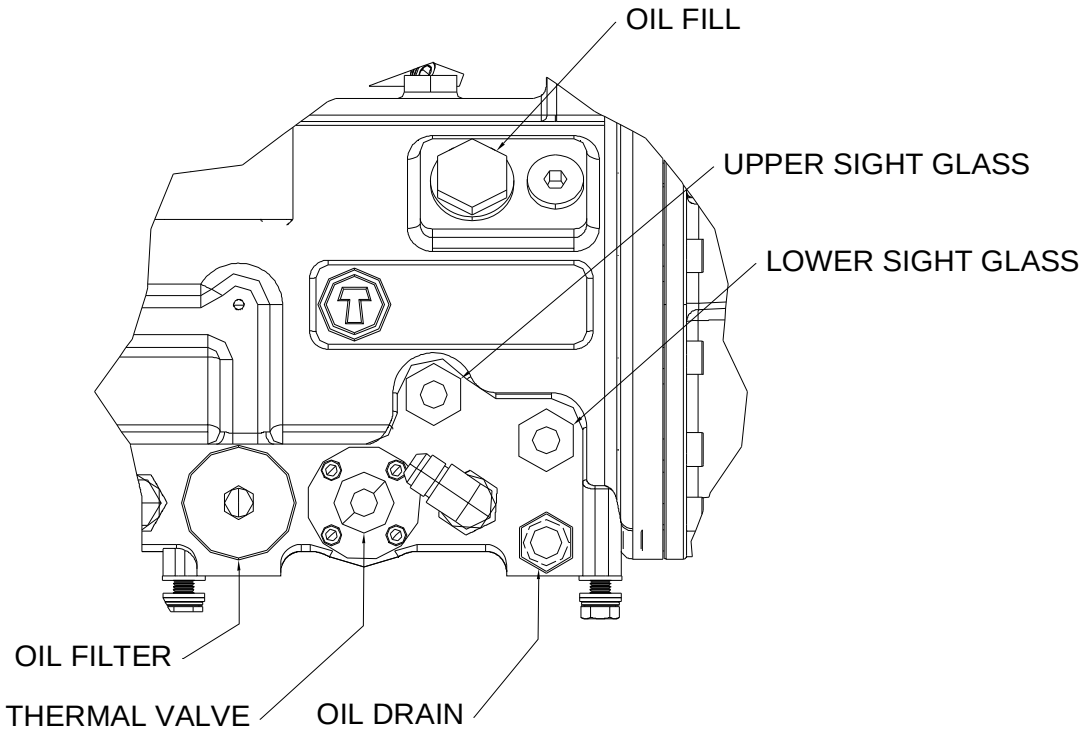
ENGINE LUBRICATION

Refer to Engine Operator's manual for recommended engine lubricating oil.

MAINTENANCE

COMPRESSOR OIL SUMP FILL, LEVEL, AND DRAIN

Before adding or changing compressor oil make sure that the sump is completely relieved of pressure. Oil is added at the fill cap on the side of the compressor. A drain plug is provided at the bottom of the sump. The proper oil level, when unit is shutdown and has had time to settle is at the midpoint of the upper oil sightglass. The package must be level when checking the oil. DO NOT OVERFILL. The oil sump capacity is given in "Compressor Specifications".



DANGER

WHILE COMPRESSOR IS RUNNING DO NOT ATTEMPT TO DRAIN CONDENSATE, REMOVE THE OIL LEVEL FILL PLUG OR BREAK ANY CONNECTION IN THE AIR OR OIL SYSTEM WITHOUT SHUTTING OFF COMPRESSOR AND MANUALLY RELIEVING PRESSURE FROM THE SUMP. FAILURE TO COMPLY WITH THIS WARNING MAY CAUSE DAMAGE TO PROPERTY AND SERIOUS BODILY HARM.

AIR INTAKE FILTER

The air intake filter is a heavy-duty single-stage high efficiency filter designed to protect the compressor from dust and foreign objects. See compressor mounting system in illustration section.

Frequency of maintenance of the filter depends on dust conditions at the operating site. The filter element must be serviced when clogged (maximum pressure drop for proper operation is 15" H_2O).

MAINTENANCE

AIR/OIL COALESCER

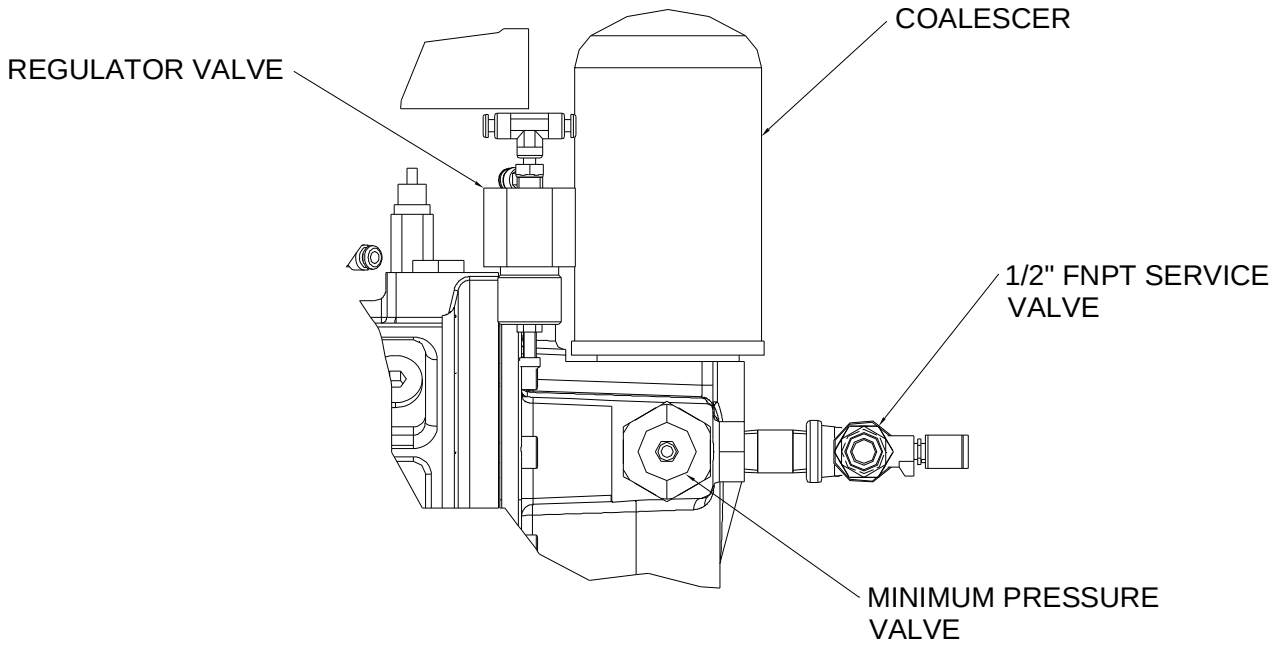
The air/oil coalescer employs an element permanently housed within a spin-on canister. This is a single piece unit that requires replacement when it fails to remove the oil from the discharge air.

To replace element, P/N 302600, proceed as follows:

1. Shutdown compressor and wait for complete blow down (zero pressure).
2. Turn element counterclockwise for removal (as viewed from bottom).
3. Install new rubber seal in head and supply a film of fluid directly on the seal.
4. Rotate element clockwise by hand until element contact seal (as viewed from bottom).
5. Rotate element at top edge of can one more turn clockwise with band wrench.
6. Run system and check for leaks.

WARNING

DO NOT SUBSTITUTE ELEMENT. USE ONLY A GENUINE BOSS INDUSTRIES REPLACEMENT ELEMENT. THIS ELEMENT IS RATED AT 200 PSI WORKING PRESSURE. USE OF ANY OTHER ELEMENT MAY BE HAZARDOUS AND COULD IMPAIR THE PERFORMANCE AND RELIABILITY OF THE COMPRESSOR, POSSIBLY VOIDING THE WARRANTY.



MAINTENANCE

OIL FILTER

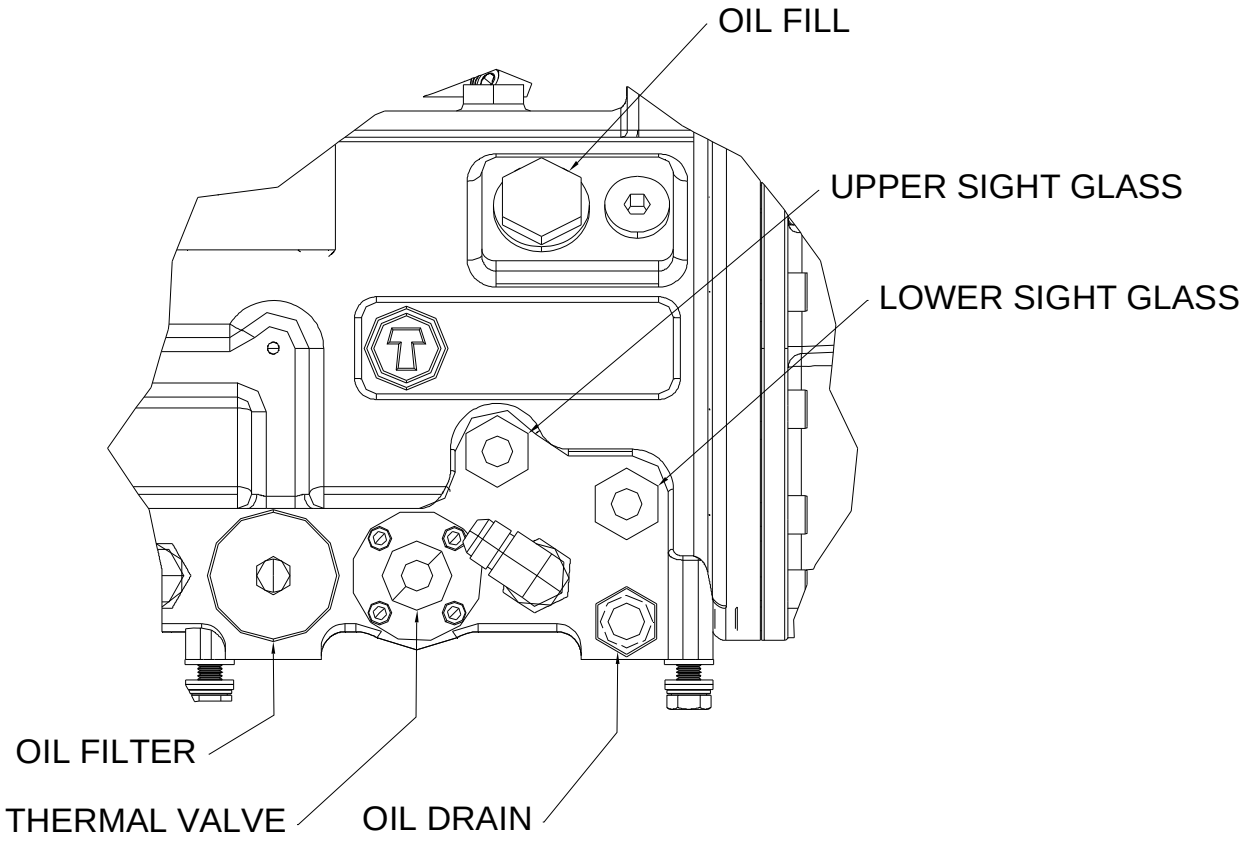
The compressor oil filter is a cartridge, throw away type. It is designed with a built in by-pass so that if there is a large restriction, due to cold oil or clogged element, the compressor will still be lubricated.

To replace filter proceed as follows:

1. Make sure system pressure is relieved.
2. Unscrew with 14mm allen wrench.
3. Remove oil filter from housing.
4. Remove gasket and clean or replace the screen.
5. Reinsert filter and gasket into housing and tighten with 14mm allen wrench.
6. Add oil, re-tighten filler cap.
7. Check for leaks in operation.

WARNING

DO NOT SUBSTITUTE ELEMENT. USE ONLY A GENUINE BOSS INDUSTRIES REPLACEMENT ELEMENT. THIS ELEMENT IS RATED AT 200 PSI WORKING PRESSURE. USE OF ANY OTHER ELEMENT MAY BE HAZARDOUS AND COULD IMPAIR THE PERFORMANCE AND RELIABILITY OF THE COMPRESSOR, POSSIBLY VOIDING THE WARRANTY.



MAINTENANCE

NOTE

PARTS REQUIRED FOR ENGINE MAINTENANCE MAY BE FOUND IN THE ENGINE PARTS MANUAL, A COPY OF WHICH IS PROVIDED WITH EACH UNIT.

FULL LOAD SPEED

Using an air flow silencer, open service air valve until 100 PSI is being held on receiver pressure gauge. Be sure there is no air leakage from pressure regulator vent hole.

With the use of an electronic photo tachometer, set the full load speed at 3500 - 3600 RPM. The governor spring tension held by an anchor bolt allows adjustments to be made.

IDLE SPEED

To adjust idle speed, close service air valve and set idle speed to 2000 - 2500 RPM by moving idle stop screw at carburetor as required. For operation at higher altitudes, it may be
desirable to raise the idle speed to improve part load response and acceleration. High altitude engine kits are available.

ENGINE INSPECTION, LUBRICATION AND MAINTENANCE

The following is a regular schedule of inspection and servicing for the engine based on operating hours. Use the factory recommended Periodic Maintenance Schedule (based on favorable operating conditions) to serve as a guide to get long and efficient engine life. Regular service periods are recommended for normal service and operating conditions. For severe duty, extreme temperature, etc., service more frequently. Neglecting routine maintenance can result in engine failure or permanent damage.

For any abnormalities in operation, unusual noises from the engine or accessories, loss of power, overheating, etc. contact your nearest Honda Service Center.

BELT TENSIONING PROCEDURE

1. Use a 9/16" wrench and a 15/16" socket wrench to set the tension on the belt. Turn the 15/16" bolt, on the front of the tensioner, clockwise to set the tension. Use the 9/16" wrench to tighten the bolt on the backside of the tensioner bracket to hold the tensioner arm in place.
2. Proper tension is 1/4" deflection with a deflection force of 9.4 lbs minimum to 13.8 lbs maximum.

BELT REPLACEMENT PROCEDURE

1. Remove compressor belt guard.
2. Use a 9/16" wrench and a 15/16" socket wrench to release the tension on the belt. Hold the 15/16" bolt, on the front of the tensioner, use the 9/16" wrench to loosen the bolt on the backside of the tensioner bracket. Turn the 15/16" bolt counter-clockwise until the tension is fully released from the belt.
3. Remove the old belt.
4. Install new belt.
5. Use a 9/16" wrench and a 15/16" socket wrench to set the tension on the belt. Turn the 15/16" bolt, on the front of the tensioner, clockwise to set the tension. Use the 9/16" wrench to tighten the bolt on the backside of the tensioner bracket to hold the tensioner arm in place.
6. Use a belt tensiometer to properly tension the belt.
7. Proper tension is 1/4" deflection with a deflection force of 9.4 lbs minimum to 13.8 lbs maximum.

MAINTENANCE

ENGINE, INSPECTION, LUBRICATION, AND MAINTENANCE CHART

SERVICE THESE ITEMS			AFTER EACH CYCLE OF INDICATED HOURS			
HOURS	8	25	50	100	200	500
INSPECT ENGINE GENERALLY	X					
CHECK OIL LEVEL	X					
SERVICE AIR CLEANER ELEMENT WRAPPER		X				
CHANGE CRANKCASE OIL (ALL ENGINES WITHOUT FILTER)		X				
CHANGE CRANKCASE OIL (STANDARD WITH FILTER)		X	X			
CHANGE CRANKCASE OIL (HIGH CAPACITY BASE WITH FILTER)		X		X		
REPLACE OIL FILTER		X		X		
CHECK BATTERY ELECTROLYTE LEVEL				X		
CLEAN COOLING FANS				X		
REPLACE AIR CLEANER ELEMENT					X	
REPLACE FUEL FILTER					X	
CHECK OR REPLACE SPARK PLUGS						X

1. Check for fuel leaks. With engine running, visually and audibly check exhaust system for leaks.

2. Perform more often when running under severe operating conditions.

3. Required for initial break-in only.

4. For detailed maintenance, refer to the HONDA SERVICE MANUAL.

TROUBLESHOOTING

This section contains instructions for troubleshooting the equipment following a malfunction. The troubleshooting procedures to be performed on the equipment are listed below. Each symptom of trouble for a component or system is followed by a list of probable causes of the trouble and suggested procedures to be followed to eliminate the cause.

In general, the procedures listed should be performed in the order in which they are listed, although the order may be varied if the need is indicated by conditions under which the trouble occurred. In any event, the procedures that can be performed in the least amount of time and with the least amount of removal or disassembly or parts should be performed first.

MACHINE WILL NOT START

1. High pressure or high temperature safety trip. Reset safety relay. Push button in on control panel.
2. Check fuel level and add fuel if necessary.
3. Plugged fuel filter and replace if necessary.
4. Low battery voltage, recharge if necessary.
5. Loose battery cables, tighten cable; dirty battery cables, clean thoroughly.
6. Plugged air filter, replace the element.
7. Engine problems may have developed, refer to your Engine Manual.
8. Defective engine oil level switch, check continuity and replace if necessary.
9. Blown fuse in wiring harness, check continuity of fuse and replace if necessary. Fuse located by engine starter solenoid.

UNPLANNED SHUTDOWN

When the operation of the machine has been interrupted by an unexplained shutdown, check the following:

1. Check to determine if compressor oil is at proper level.
2. Check oil cooler for dirt, slush, ice on the fins, or any other obstructions to cooling airflow.
3. Make a thorough external check for any cause of shutdown such as broken hose, broken oil lines, loose or broken wire, etc.
4. Check electric fan motor and wiring.
5. Check fuses in wire harness, check continuity of fuse and replace if necessary. Fuse located by starter solenoid.
6. Check the engine oil level with the engine stopped and in a level position. If the oil level is low, remove the oil filler cap, and fill to the upper limit mark on the dipstick with the recommended oil.

ENGINE OVERHEATING

1. Low oil level, refill.
2. Air blockage into engine from blower/PTO side.
3. Air blockage from exhaust side of engine.
4. Dirty oil in engine.

TROUBLESHOOTING

IMPROPER DISCHARGE PRESSURE

1. If discharge pressure is too low, check the following:
    a. Too much air demand.
    b. Service valves open blowing to atmosphere.
    c. Leaks in service line.
    d. Restricted compressor inlet air filter.
    e. Faulty control system operation (regulator, inlet valve etc.)
    f. Low engine speed.

2. If discharge pressure is too high or safety valve blows, check the following:
    a. Oil separator plugged up.
    b. Faulty safety valve.
    c. Faulty regulator or set to high.
    d. Inlet valve leaking, or partially open. Loss of pressure signal to inlet valve from regulator causing inlet valve to stay open.

COMPRESSOR

Abnormal compressor oil consumption or oil in service line, check for the following:

1. Over filling of oil sump.
2. Leaking oil lines or oil cooler.
3. Plugged oil return line: check entire line and check valve/orifice fitting at compressor port.
4. Defective separator element.
5. Compressor shaft seal leakage.
6. Discharge pressure below 55 PSI.

SEPARATOR PLUGGING

If the separator element has to be replaced frequently because it is plugging up, it is an indication that foreign material may be entering the compressor inlet or the compressor oil is breaking down.

Compressor oil can break down prematurely for a number of reasons.

1. Extreme operating temperature
2. Negligence in draining condensate from oil sump
3. Using the improper type of oil
4. Dirty oil.

The complete inlet system should be checked for leaks.

TROUBLESHOOTING

HIGH COMPRESSOR DISCHARGE TEMPERATURE

1. Check compressor oil level. Add oil if required (see section for oil specifications).
2. Check electric fan and switch.
3. Clean outside of oil cooler.
4. Clean oil system (cooler) internally.
5. Plugged compressor oil filter. Change element.
6. Plugged oil return line, clean orifice and check valve.

INSUFFICIENT AIR DELIVERY

1. Plugged compressor air filter, clean or replace.
2. Plugged air/oil separator. Replace separator element and also change compressor oil and oil filter at this time.
3. Defective pressure regulator, adjust or repair.
4. Engine speed too low, readjust engine speed.

RECOMMENDED SPARE PARTS

ENGINE MAINTENANCE PARTS	
304968	ENGINE OIL FILTER
304969	ENGINE FUEL FILTER
304967	ENGINE AIR CLEANER ELEMENT
304971	SPARK PLUGS
COMPRESSOR MAINTENANCE PARTS	
307275	DRIVE BELTS (2 QTY)
307152	COMPRESSOR AIR CLEANER ELEMENT
302601	COMPRESSOR OIL FILTER
302600	COMPRESSOR COALESCING ELEMENT
302865	FAN SENSOR
307471	REGULATOR REPAIR KIT
307117	SHAFT SEAL REPAIR KIT SCI8D

WARRANTY INFORMATION/CLAIMS

WARRANTY

Boss Industries, Inc.. (BOSS) warrants that this Rotary Screw Compressor unit conforms to applicable drawings and specifications approved in writing by BOSS. The unit assembly will be free from defects in material and workmanship for a period of two (2) years from the date of initial operation or thirty (30) months from the date of shipment, whichever period first expires. All other components and parts of BOSS manufacture, will be free from defects in material and workmanship for a period of one (1) year from the date of initial operation or eighteen (18) months from the date of shipment, whichever period first expires. If within such period BOSS receives from the Buyer written notice of and alleged defect in or non-conformance of the unit, all other components and parts of BOSS manufacture and if in the judgment of BOSS these items do not conform or are found to be defective in material of workmanship, BOSS will at its option either, (a) furnish a Service Representative to correct defective workmanship, or (b) upon return of the item F.O.B. BOSS original shipping point, repair or replace the item or issue credit for the replacement item ordered by Buyer, (Defective material must be returned within thirty (30) days of return shipping instructions from BOSS. Failure to do so within specified time will result in forfeiture of claim), or (c) refund the full purchase price for the item without interest. Factory installed units will also include warranty on installation for a period of one (1) year. This warranty does not cover damage caused by accident, misuse or negligence. If the compressor unit is disassembled the warranty is void. BOSS's sole responsibility and Buyer's exclusive remedy hereunder is limited to such repair, replacement, or repayment of the purchase price. Parts not of BOSS manufacture are warranted only to the extent that they are warranted by the original manufacture. BOSS shall have no responsibility for any cost or expense incurred by Buyer from inability of BOSS to repair under said warranty when such inability is beyond the control of BOSS or caused solely by Buyer.

There are no other warranties, express, statutory or implied, including those of merchantability and of fitness of purpose; nor any affirmation of fact or representation which extends beyond the description of the face hereof.

This warranty shall be void and BOSS shall have no responsibility to repair, replace, or repay the purchase price of defective or damaged parts or components resulting directly or indirectly from the use of repair or replacement parts not of BOSS manufacture or approved by BOSS or from Buyer's failure to store, install, maintain, and operate the compressor according to the recommendations contained in the Operating and Parts Manual and good engineering practice. The total responsibility of BOSS for claims, losses, liabilities or damages, whether in contract or tort, arising out of or related to its products shall not exceed the purchase price. In no event shall BOSS be liable for any special, indirect, incidental or consequential damages of any charter, including, but not limited to, loss of use of productive facilities or equipment, loss of profits, property damage, expenses incurred in reliance on the performance of BOSS, or lost production, whether suffered by Buyer or any third party.

BOSS INDUSTRIES
1761 GENESIS DRIVE
LA PORTE, IN 46350
1-800-635-6587

SUMMARY OF MAIN WARRANTY PROVISIONS

As claims, policies and procedure are governed by the terms of BOSS Industries; warranty, it is necessary to outline some of the more important provisions.

The BOSS INDUSTRIES warranty applies only to new and unused products which, after shipment from the factory, have not been altered, changed, repaired or mistreated in any manner whatsoever. Normal maintenance items such as lubricants, filters, and shaft seals are not warrantable items.

Parts not of BOSS INDUSTRIES manufacture are warranted only to the extent they are warranted by the original manufacturer.

Damage resulting from abuse, neglect, misapplication or overloading of a machine, accessory or part is not covered under warranty.

Deterioration or wear occasioned by chemical and/or abrasive action or excessive heat shall not constitute defects.

Parts replacement and/or correction of defective workmanship will normally be handled by BOSS INDUSTRIES or their authorized distributor.

Failure to file a detailed warranty claim/service report for each occurrence of material defect of defective workmanship will cause warranty claim to be rejected.

Defective material must be returned within 30 days of receipt of shipping instructions. Failure to do so within specified time will result in forfeiture of claim.

The distributor is responsible for the initial investigation and write up of the warranty claim.

Distributor shall be allowed no more than 30 days from date of repair to file a warranty claim/service report.

Warranty for failure of BOSS INDUSTRIES replacement parts covers the net cost of the party only, not labor and mileage.

The BOSS INDUSTRIES warranty does not cover diagnostic calls and travel. That is time spent traveling to the machine to analyze the problem and returning with the proper tools and parts to correct the problem.

BOSS INDUSTRIES will deduct from allowable credits for excess freight caused by sender failing to follow return shipping instructions.

Distributors or end-users automatically deducting the value of a warranty claim from outstanding balances due and payable to BOSS INDUSTRIES prior to receiving written notification of BOSS INDUSTRIES approval of the warranty claim may be subject to forfeiture of the entire claim.

WARRANTY/RETURN GOODS INSTRUCTIONS

The warranty/return procedure outlined below is provided to give the claimant the information necessary to file a warranty/return claim, and enable BOSS INDUSTRIES the ability to best serve its' customers.

Please see the following instructions to initiate a return:

Contact BOSS INDUSTRIES Returns Department by telephone at 219.324.7776 or via email at service@bossair.com. You may also send a fax at 219.324.7470.

WARRANTY CLAIMS – PREPARATION OF PART RETURN

Parts returned to the factory must be properly packaged to prevent damage during shipment. Damage to a part as a result of improper handling or packing could be cause for denial. When addressing the package for shipment, the following information must be on the outside of, or tagged clearly, to the package.

1. Return Goods Authorization #.
2. Distributor or end-users return address.
3. Correct factory address.
4. Number of packages pertaining to each claim.

NOTE: *Our warranty requires that all defective parts be returned to BOSS INDUSTRIES freight prepaid. Items sent without RGA number will not be accepted. Unauthorized Returns Will Immediately Be Refused At Dock.*

RETURN OR WARRANTY CLAIMS – FILING PROCEDURES

1. Initiate through a purchase order for warranty part or request for credit.
2. RGA will accompany replacement part.
3. BOSS INDUSTRIES will confirm disposition of failed part within 30 days of receipt and or request additional information.
4. Claim denial will result in issuance of a letter of denial.
5. BOSS INDUSTRIES will consider each claim on its' own merit and reserves the right to accept or reject claim request. In case of air-ends, these will be returned to the manufacturer for their analysis/input.
6. Send Warranty Claim to:
   BOSS INDUSTRIES, INC.
   1761 Genesis Drive
   LaPorte, IN 46350
   Attn: Returns Dept.

GENERAL

An approved claim depends on the following provision:

1. An RGA # must be issued by BOSS INDUSTRIES. (See filing procedures.)
2. Failed part must be returned within 30 days of original invoice date, freight prepaid, with RGA #.
3. Part is determined to be defective.
4. Workmanship is determined to be defective.
5. Machine is within warranty period.
6. Machine has been operated within design conditions.

Claims made through distributors must be verified by distributor prior to contacting BOSS INDUSTRIES.

DAMAGE IN TRANSIT

Do not return damaged merchandise to BOSS INDUSTRIES, please follow claim procedure.

1. Loss in transit:
   The merchandise in our kit or provided in our factory installations has been thoroughly inspected or carefully installed and tested before leaving our plant. However, regardless of the care taken at the factory, there is a possibility that damage may occur in shipment. For this reason, it is recommended that the unit be carefully inspected for evidence of possible damage or malfunction during the first few hours of operation. Responsibility for the safe delivery of the kit or factory installed unit was assumed by the carrier at the time of shipment. Therefore, claims for loss or damage to the contents of the kit or factory installed unit should be made upon the carrier.

2. Concealed loss or damage:
   Concealed loss or damage means loss or damage, which does not become apparent until the kit is unpacked or the factory-installed unit is run by the enduser. The contents of the kit or factory installed unit may be damaged due to rough handling while in route to its destination, even thought the kit or factory installed unit shows no external damage. When the damage is discovered upon unpacking, make a written request for inspection by the carrier agent within fifteen days of delivery date. Then file a claim with the carrier since such damage is the carrier's responsibility.

By following these instructions carefully, we guarantee our full support of your claims, to protect you against loss from concealed damage.

3. Visible Loss or Damage
   Any external evidence of loss or damage must be noted on the Freight Bill or Express Receipt, and signed by the carrier's agent. Failure to adequately describe such external evidence of loss, or damage may result in the carrier refusing to honor a damage claim. The carrier will supply the form required to file such a claim.

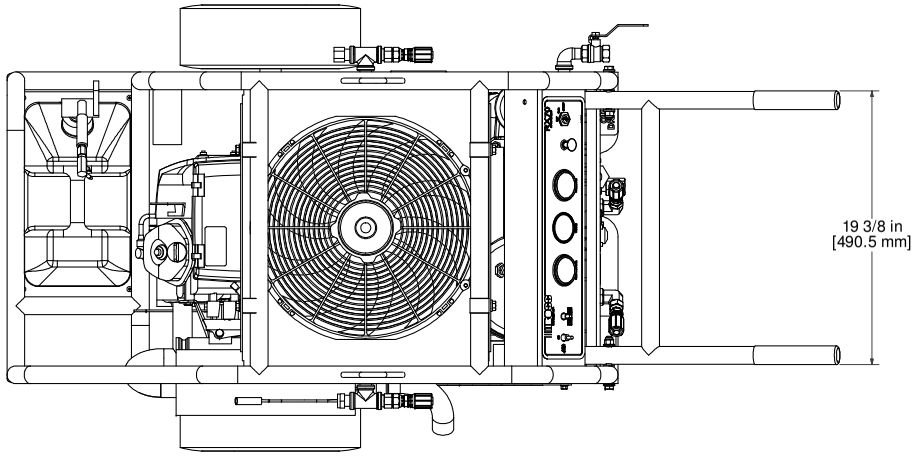
SCREW COMPRESSOR AIR-END EXCHANGE PROGRAM

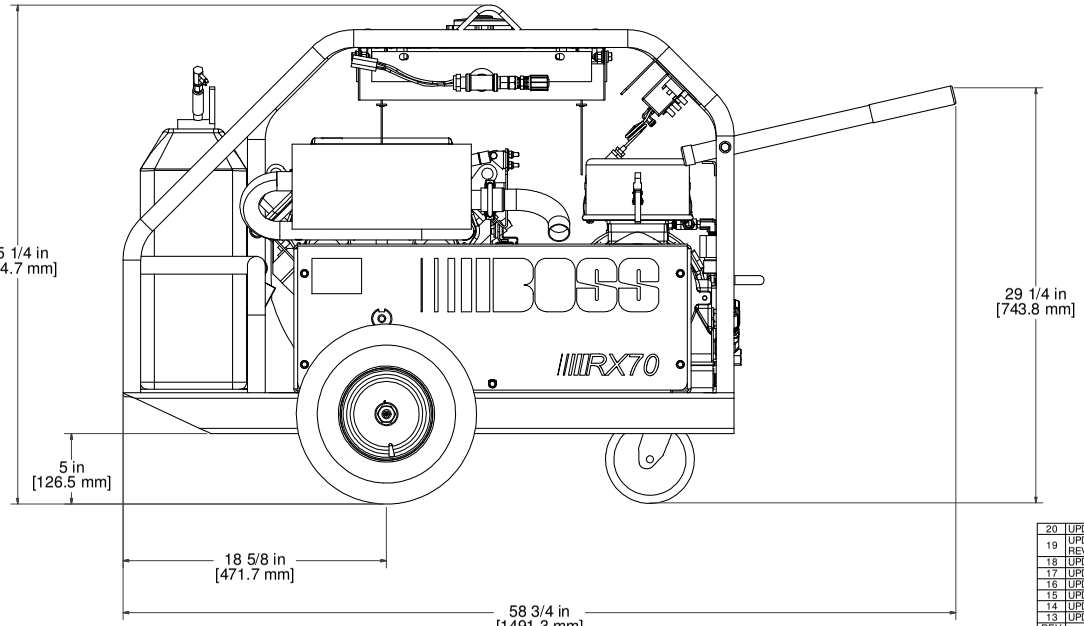
Replacement air-ends are available from the factory. For current prices and availability, contact BOSS INDUSTRIES, Inc. or an authorized BOSS INDUSTRIES distributor. Prices are F.O.B. shipping point. Prices do not include labor for removal or installation.

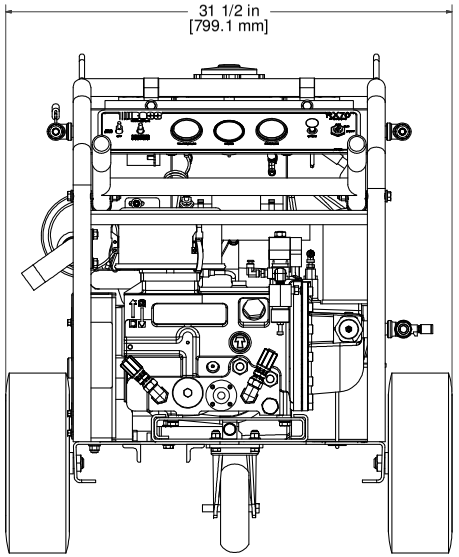
PARTS & ILLUSTRATION SECTION

Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	200381	INST. PANEL & PARTS, 24HP RX70
2	1	200367	FRAME & PARTS, 24HP RX70
3	1	200365	COMPRESSOR & PARTS, 24HP RX70
4	1	200366	ENGINE & PARTS, 24HP RX70
5	1	200380	COOLER & PARTS, 24HP RX70
6	1	200215	HOSE AND PARTS, RX70
NS	1	307239	MANUAL, BOSS 24HP RX70
NS	1	303807	CRATE, SHIPPING BULLET 36X50X45







REV	DESCRIPTION	DATE	ENG
20	UPDATED 200365 TO REV 12	11/8/2010	MCM
19	UPDATED 200365 TO REV 11 & 200367 TO REV 5	10/18/2010	MCM
18	UPDATED 200365 TO REV 10	9/20/2010	MCM
17	UPDATED 200365 TO REV 9	7/12/2010	CRH
16	UPDATED 200365 TO REV 8	6/16/2010	MCM
15	UPDATED 200366 TO REV 2	4/20/2010	CRH
14	UPDATED 200366 TO REV 1	3/22/2010	MCM
13	UPDATED 200381 TO REV 3	3/10/2010	DCL

REVISION HISTORY

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1.001 TO 5.000 ± .015
5.001 TO 10.000 ± .020
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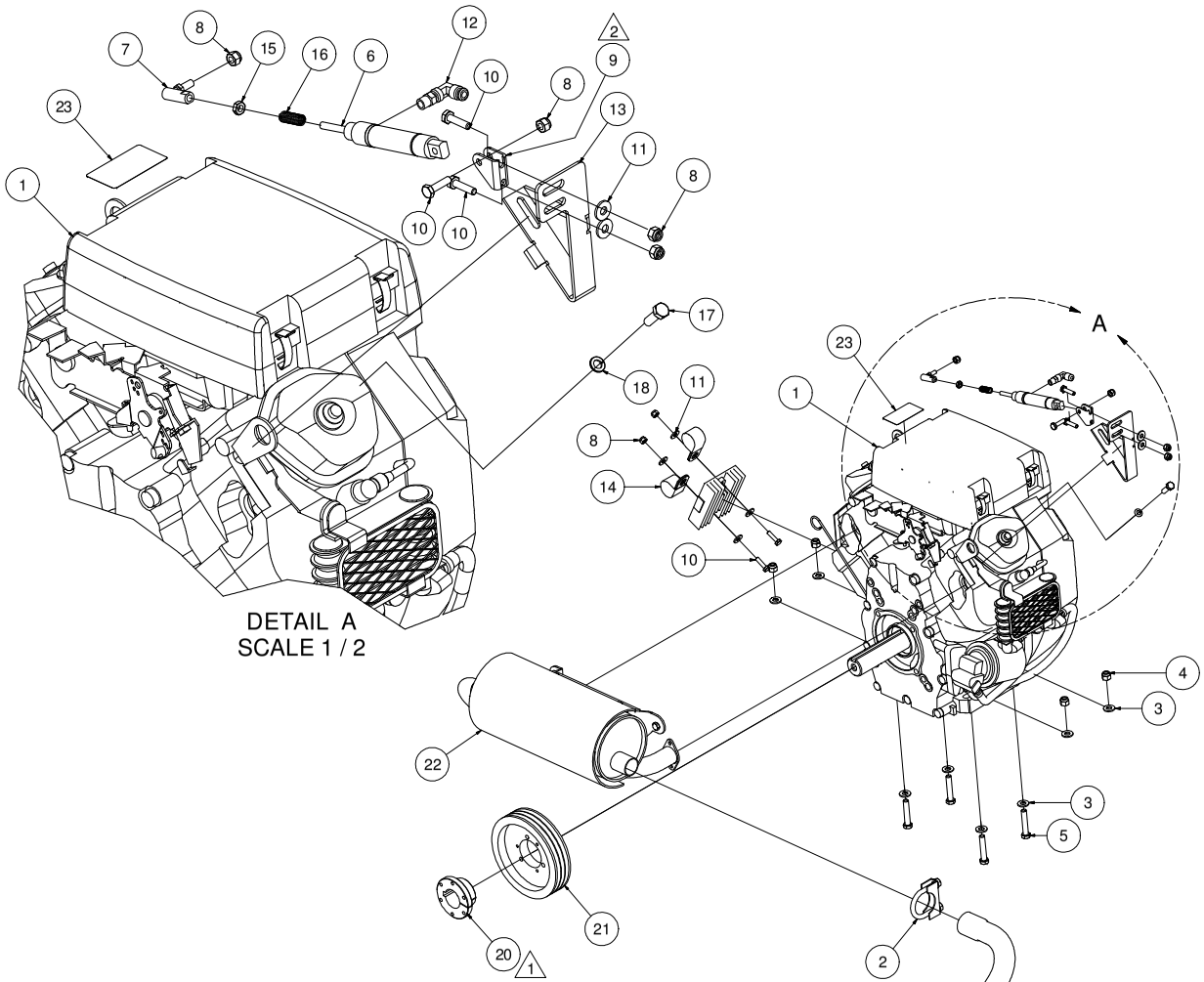
DRAWN	MCM	2/12/2008
CHECKED	NDB	2/12/2008
MATERIAL	N/A	
PATH	G:\Inventor Files\20k\20071-001.dwg	

BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350

DESCRIPTION
RX70 PORTABLE 24HP

SIZE	SCALE	DWG NO	REV
D	1=4	20071-001	20

SHEET 1 OF 1



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	307236	ENGINE, HONDA 24 HP 3600 RPM
2	1	120-11601	CLAMP,1 1/2 EXHAUST
3	8	938206-071	WASHER, FLAT GR8 3/8
4	4	925506-198	NUT, NYLOC GR8 3/8-16
5	4	929806-200	BOLT, HEX GR8 3/8-16 X 2
6	1	120-36345	CYLINDER, AIR ENGINE SPEED
7	1	120-19071	BALL JOINT, 1/4-28 THRD
8	6	924304-145	NUT, NYLOC GR5 1/4-20
9	1	158-36347	BRACKET,PIVOT AIR CYLINDER
10	5	929104-100	BOLT, HEX GR5 1/4-20 X 1
11	6	938604-071	WASHER, FLAT GR5 1/4
12	1	980704-012	ELBOW, 1/4 TUBE SWVL X 1/8 MNPT
13	1	304602	BRACKET, AIR CYLINDER RX70
14	2	304957	CLAMP, HOSE 1 1/4"
15	1	924604-164	NUT, JAM 1/4-28
16	1	120-16580	SPRING, PISTON RETURN
17	1	929208-250	BOLT, HEX GR10.9 8MM X 25MM
18	1	938808-200	WASHER, LOC 8MM
20	1	300745-144	BUSHING, SDS 1.4375 X .375 KEY
21	1	300936	PULLEY, 6.5 3GR 3V
22	1	304890	MUFFLER, 24HP HONDA TOP MT RIGHT
23	1	300516	DECAL, ENGINE OIL FILL
24	1	307275	BELT, 3 BANDED 3VX500
27	1	307307	ELBOW, EXHAUST 24HP RX70

REVISION HISTORY			
REV	DESCRIPTION	DATE	ENG
1	REPLACED 300745-112 WITH 300745-144.	3/20/2010	MCM
2	FLIPPED 158-36347 TO CLEAR MUFFLER GUARD	4/20/2010	CRH

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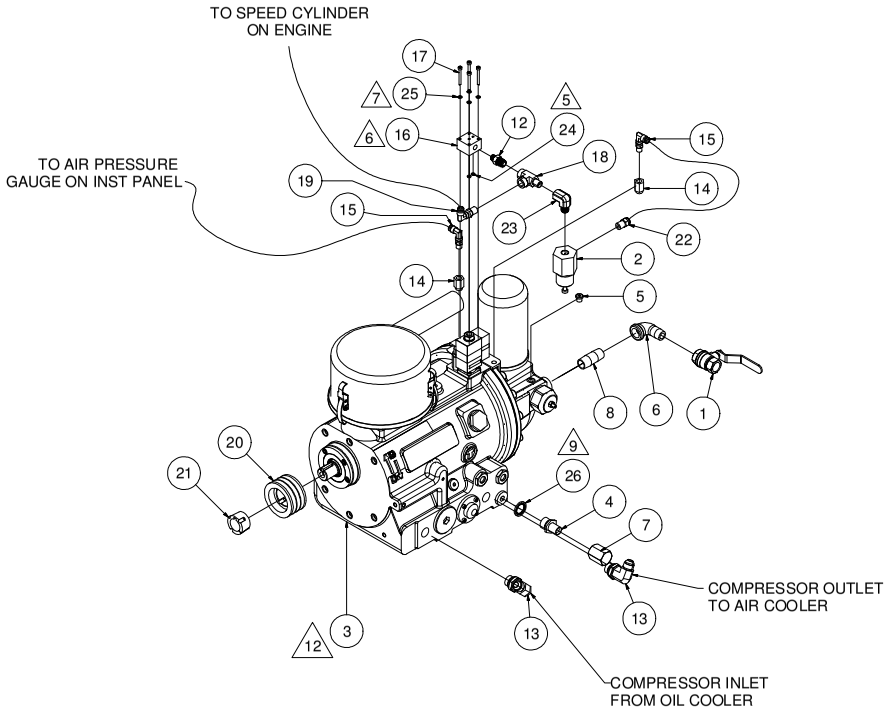
MATERIAL

BOSS INDUSTRIES
1761 GENESIS DR.
LAPORTE, IN 46350

TITLE
ENGINE & PARTS, 24HP RX70

SIZE D | DWG NO 200366 | REV 2
SCALE 1:4 | SHEET 1 OF 1



Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	300022-050	VALVE, SERVICE 1/2 VENTED PORT
2	1	300057	VALVE, REGULATOR 1/4
3	1	40034	ASSY, AIREND SCI8D INTEGRATED
4	1	302631	ADAPTER, 1/2 BSPP X 1/2 NPT
5	1	305624	PLUG, PIPE 1/8 BSPP HEX DRIVE
6	1	901115-020	ELBOW, PIPE STREET 1/2 GAL
7	1	906030-020	CAP, PIPE HEX 1/2 ZINC
8	1	922108-020	NIPPLE, PIPE 1/2 X 2 GAL SCH40
12	1	961604-012	NIPPLE, HYD HEX RED 1/4 X 1/8
13	2	970608-050	ELBOW, HYD 1/2 MBSPP X 1/2 MJIC
14	2	970802-012	ADAPTER, 1/8 MBSPP X 1/8 FNPT
15	2	980704-012	ELBOW, 1/4 TUBE SWVL X 1/8 MNPT
16	1	307990	ADAPTER, SCI8 O-RING SOLENOID BLOCK
17	4	929304-350	BOLT, SOC HD 4MM X 35MM GR10.9
18	1	964804-025	TEE, MR 1/4F X 1/4M X 1/4F
19	1	980704-025	ELBOW, 1/4 TUBE SWVL X 1/4 MNPT
20	1	307248	PULLEY, 2.8 3GR 3V TAPER-LOCK
21	1	307249	BUSHING, TAPER-LOCK #1108 25MM
22	1	980604-025	CONNECTOR, TUBE 1/4 PAR X 1/4 NPT
23	1	960704-025	ELBOW, HYD 1/4 FNPT X MNPT STREET
24	2	307987	O-RING, 5/32 ID X 9/32 OD X 1/16 THICK
25	4	938804-090	WASHER, LOC 4MM
26	1	308525	SEAL, WASHER 1/2 MBSPP
NS	3 ft	89034176	TUBE, AIR BRAKE .25
NS	6 in	301960-025	TUBE, PARAFLEX 1/4 OD X .040 WALL X FT NYLON

REVISION HISTORY

REV	DESCRIPTION	DATE	ENG
12	UPDATED 40034 TO REV 2	11/6/2010	MCM
11	UPDATED PARTS TO ADD A SLIDE PLATE	10/15/2010	MCM
10	UPDATED 40034 TO REV 1	9/16/2010	MCM
9	ADDED 308525	7/12/2010	CRH
8	REPLACED 301722 WITH 40034	6/16/2010	MCM
7	ADDED (4) 938804-090	12/2/2009	MCM
6	UPDATED 307990 TO REV 1	9/22/2009	MCM
5	REPLACED 307132 WITH 307990; ADDED 307987	9/11/2009	DCL

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100 TO 500.0 ± .02
500 TO 10.000 ± .05
10.01 & OVER ± .025

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DECIMAL ± .03
ANGULAR ± 1°
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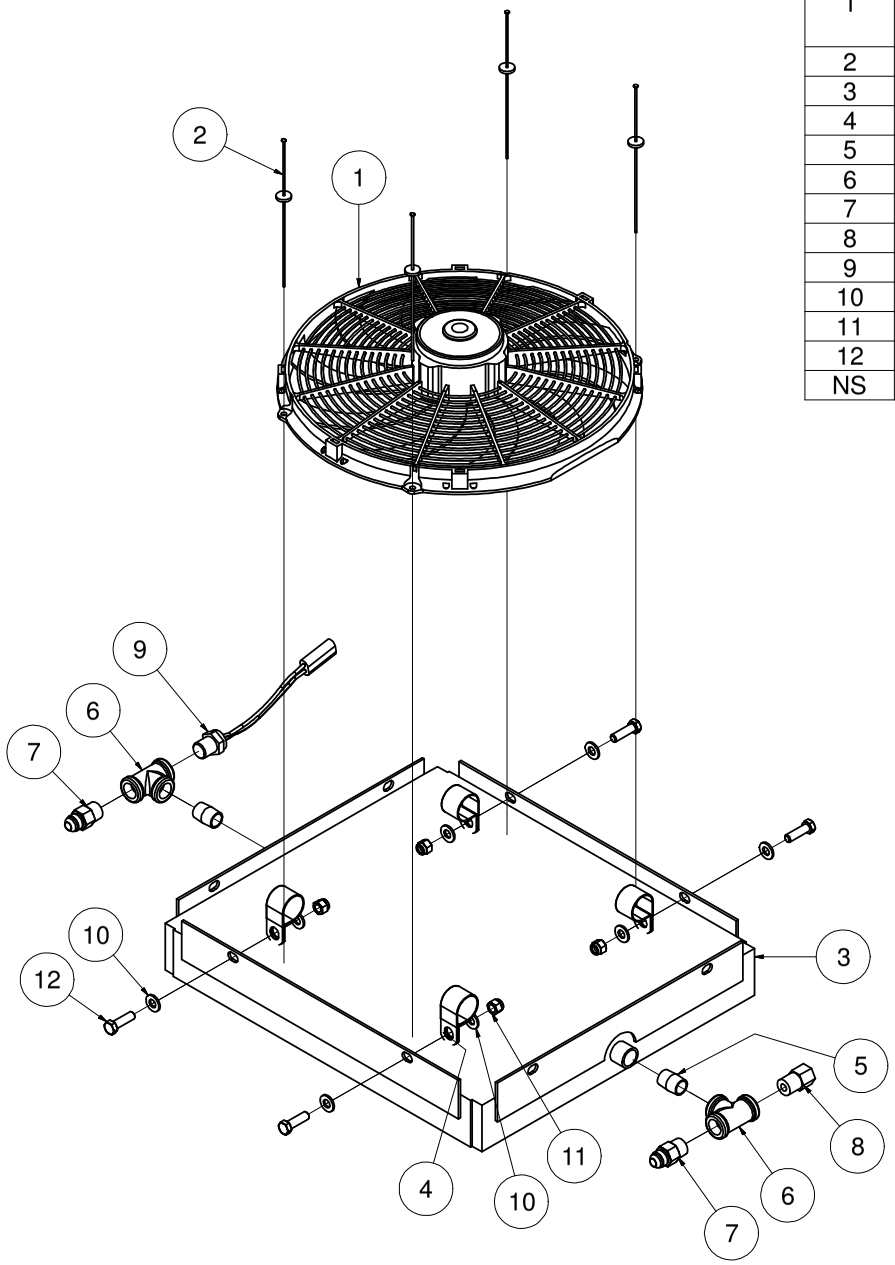
MATERIAL N/A
PATH K:\Inventor Files\200k\200365.dwg

BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350

DESCRIPTION
COMPRESSOR & PARTS, 24HP RX70

SIZE D | SCALE 1=4 | DWG NO 200365 | REV 12
SHEET 1 OF 1



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	302253	FAN ASSY, W/MOTOR & GRILL 14.09 PULLER CURVED BLADE
2	4	300817	FASTENER, FAN CLR MTG EACH
3	1	300424	COOLER, OIL 17.5
4	4	304957	CLAMP, HOSE 1 1/4"
5	2	922208-000	NIPPLE, PIPE 1/2 X CLOSE GAL SCH80
6	2	902415-020	TEE, PIPE 1/2 GAL 150PSI
7	2	960108-050	CONNECTOR, 1/2 MJIC X 1/2 MNPT
8	1	302087	BULBWELL, 5/8 UNF X 1/2 NPT
9	1	302865	SENSOR, TEMP 175 F NO W/WP CONN
10	8	938206-071	WASHER, FLAT GR8 3/8
11	4	925506-198	NUT, NYLOC GR8 3/8-16
12	4	929806-125	BOLT, HEX GR8 3/8-16 X 1 1/4
NS	2 ft	300444	TAPE, 1/16 X 1/2 CLOSED CELLO

P/N:307239

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MACHINED SURFACES
NOMINAL DIM.
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5.001 TO 10.000 ±.020
10.001 & OVER ±.025
UNMACHINED SURFACES
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DECIMAL ±.03
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Rev. Num.	Rev. Date	Released For	EN Num.
DRAWN CRH	2/20/2008		
CHECKED NDD	2/20/2008		

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MATERIAL

BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350

TITLE
COOLER & PARTS, 24HP RX70

SIZE C | DWG NO 200380-999 | REV 0

SCALE 1=4 | SHEET 1 OF 1

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	304537	AXLE, PNEUMATIC WHEEL 60GP
2	1	305422	BRACKET, BATTERY HOLD DOWN 4" TO 6 1/8"
3	1	304721	HANDLE, RX70 WHEELBARROW
4	16	938206-071	WASHER, FLAT GR8 3/8

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
5	10	925506-198	NUT, NYLOC GR8 3/8-16
6	1	304965	PANEL, FINGER GUARD FS-200
7	1	304561	FITTING, FUEL PICK-UP 1/4 MNPT
8	2	304709	SPACER, AXLE 3/4" I.D. X 1" LG.

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
9	2	304692	TIRE-WHEEL, 12.7" X 4.9" X 6"RIM 3/4" SHAFT
10	1	304521	BATTERY, 12V EVER-START ES16B
11	6	977006-062	WASHER, NYLON 3/8 X .06 X 3/4
12	2	304959	GRIP, RX70 HANDLE 1 1/4 I.D.
13	1	304964	BRACKET, FINGER GUARD FS-200
14	5	929704-050	BOLT, WHIZLOCK GR5 1/4-20 X 1/2
15	2	305017	CAP, 1 1/4 I.D. PLASTIC
16	1	301941	ISOLATOR, 1/4 X 8 1/2 X 14 1/2 #264 NEOPRENE
18	1	304753	CASTER WHEEL, 6.000in SWIVEL 440 LBS
19	1	302568	DECAL, COMPR SIGHT GLASS
20	1	300913	DECAL, OIL DRAIN
21	2	104-90027	DECAL, HOT EXHAUST 2-377
22	1	300515	DECAL, FUEL FILL
23	2	300968	DECAL, BELT GUARD
24	1	104-90032	DECAL, 12 VOLT 2-380
25	1	300042	DECAL, WARNING CONNECT AIR
26	1	300039	DECAL, WARNING READ MANUAL
27	1	300038	DECAL, DANGER HOT OIL
28	1	300040	DECAL, DANGER BREATHING
29	1	304672	DECAL, RX70 LOGO
30	1	300649	DECAL, BOSS
31	2	929806-350	BOLT, HEX GR8 3/8-16 X 3 1/2
32	1	305761	DECAL, SERIAL TAG BOSS
33	4	943103-025	RIVET, POP 3/16 X 1/2 ALUMINUM
34	1	304545	FRAME, RX70
35	5	961504-090	NUT, TINNERMAN 1/4-20
36	4	929806-100	BOLT, HEX GR8 3/8-16 X 1
37	1	40012	ASSY, RX70 FUEL TANK
38	1	307324	COUPLER, 1/2 BARB X 1/4 FNPT
39	1	307361	PLATE, ADJ. COMP SCI 8
40	1	308779	PLATE, ADJ. BASE RX70 SCI8
41	4	929806-125	BOLT, HEX GR8 3/8-16 X 1 1/4
42	1	307360	BOLT, HEX GR8 1/2-13 X 3 FULL THRD
43	1	925508-262	NUT, NYLOC GR8 1/2-13
44	4	929210-250	BOLT, HEX GR10.9 10MM X 25MM
45	4	938810-220	WASHER, LOC 10MM
46	4	938910-200	WASHER, FLAT 10MM
47	1	937808-125	WASHER, LOC GR8 1/2
NS	1	304712	STRAP, TIE DOWN 20" TO 40" W/ 1" HOOKS
NS	1 ft	307702-031	HOSE, CARB CERT FUEL LINE 5/16"
NS	1 ft	307702-025	HOSE, CARB CERT FUEL LINE 1/4"
NS	1	301861	CLAMP, HOSE 1/4"
NS	1	305407	BULB, FUEL PRIMER 1/4" BARB ENDS
NS	1	300801	CABLE, BATTERY NEG 24" BLACK
NS	1	123-65929	CABLE ASSY RED 2GA 32"
NS	1	304562	FITTING, FUEL MARINE X 3/8" BARB
NS	1	301174	COVER, BATTERY CABLE END POS
NS	1	301175	COVER, BATTERY CABLE END NEG

DETAIL A
SCALE 1 / 4

DETAIL B
SCALE 1 / 4

REV	DESCRIPTION	DATE	ENG
	REVISION HISTORY		
5	UPDATED PARTS TO ADD A SLIDE PLATE	10/18/2010	MCM
4	ADDED (1) 304562	2/3/2010	MCM
3	REMOVED BELT TENSIONER PARTS	8/31/09	DCL
2	307702-025 WAS 300524; 307702-031 WAS 300524-031	2/27/2009	CRH
1	CHANGED FUEL TANK AND FITTINGS	1/15/2008	BSM

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MACHINED SURFACES: FRACTIONAL ± 1/16; DECIMAL ± .03; ANGULAR ± 1°

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DRAWN	CRH	1/15/2008
CHECKED	NDD	1/15/2008
MATERIAL	N/A	
PATH	G:\Inventor Files\200k\200367.dwg	

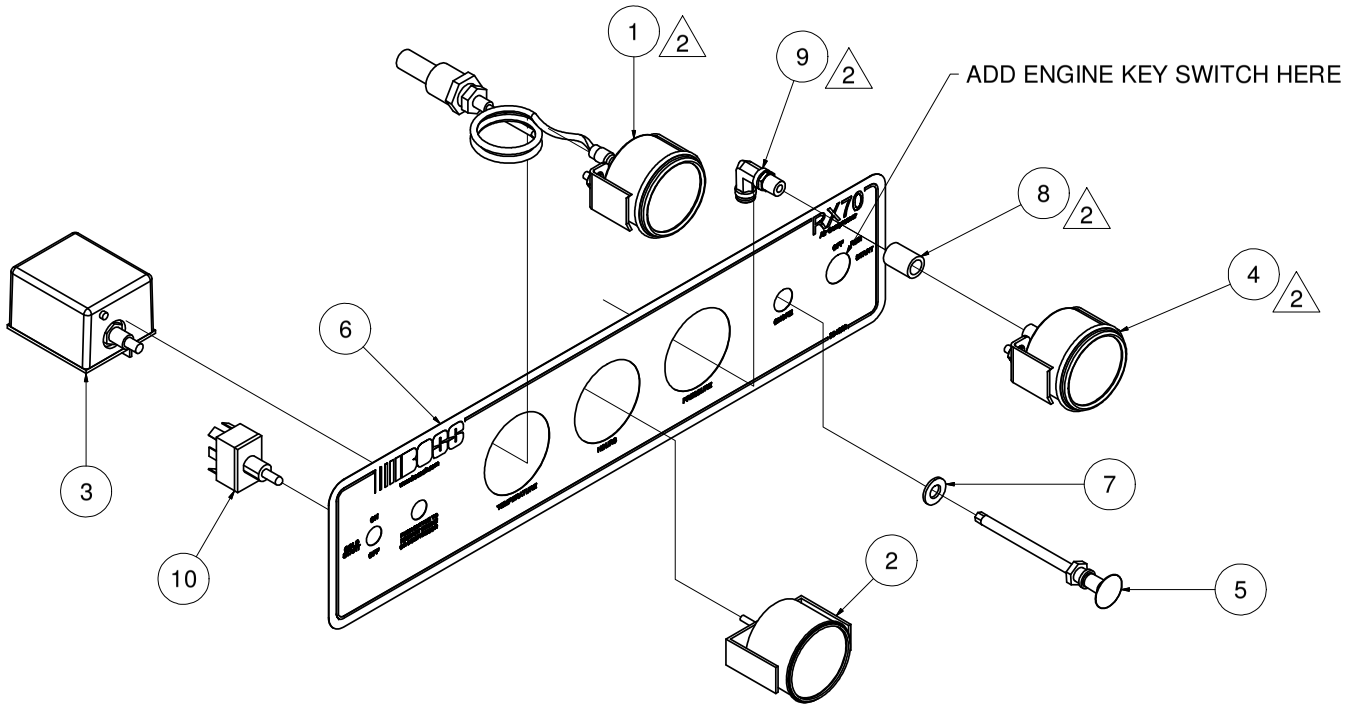
BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350

DESCRIPTION
FRAME & PARTS, 24HP RX70

SIZE	SCALE	DWG NO	REV
D	1 =8	200367	5

SHEET 1 OF 1

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	300076-004	SWITCHGAUGE, TMP 4 ft - 250
2	1	300074	GAUGE, HOURMETER
3	1	300079	SWITCH, SHUTDOWN 117
4	1	300075	SWITCHGAUGE, PRESSURE
5	1	300399	CABLE, CHOKE
6	1	304622	DECAL, INST PANEL RX70
7	1	938605-071	WASHER, FLAT GR5 5/16
8	1	901215-005	COUPLING, PIPE 1/8 GAL 150PSI
9	1	987304-012	ELBOW, 1/8 MNPT X 1/4 TUBE 200PSI 250 DEG
10	1	300555	SWITCH, TOGGLE ON/OFF GEN DPDT
NS	1	305043	HARNESS, RX70
NS	32 in	302089-150	LOOM, 1.5" HIGH TEMP



REVISION HISTORY			
REV	DESCRIPTION	DATE	ENG
3	UPDATED 305043 TO REV 4.	3/10/2010	DCL
2	REPLACED 302142 WITH 300075; 302141-004 WITH 300076-004; 901215-010 WITH 901215-050; 987304-025 WITH 987304-012.	9/8/2009	MCM
1	UPDATED 305043 TO REV 3.	7/7/2008	MCM

PROPRIETARY INFORMATION
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MACHINED SURFACES
NOMINAL DIM.
0.000 TO 1.000 ± .010
1.001 TO 5.000 ± .015
5.001 TO 10.000 ± .020
10.001 & OVER ± .025
DO NOT SCALE TOLERANCES UNLESS NOTED.

UNMACHINED SURFACES
FRACTIONAL ± 1/16
DECIMAL ± .03
ANGULAR ± 1°

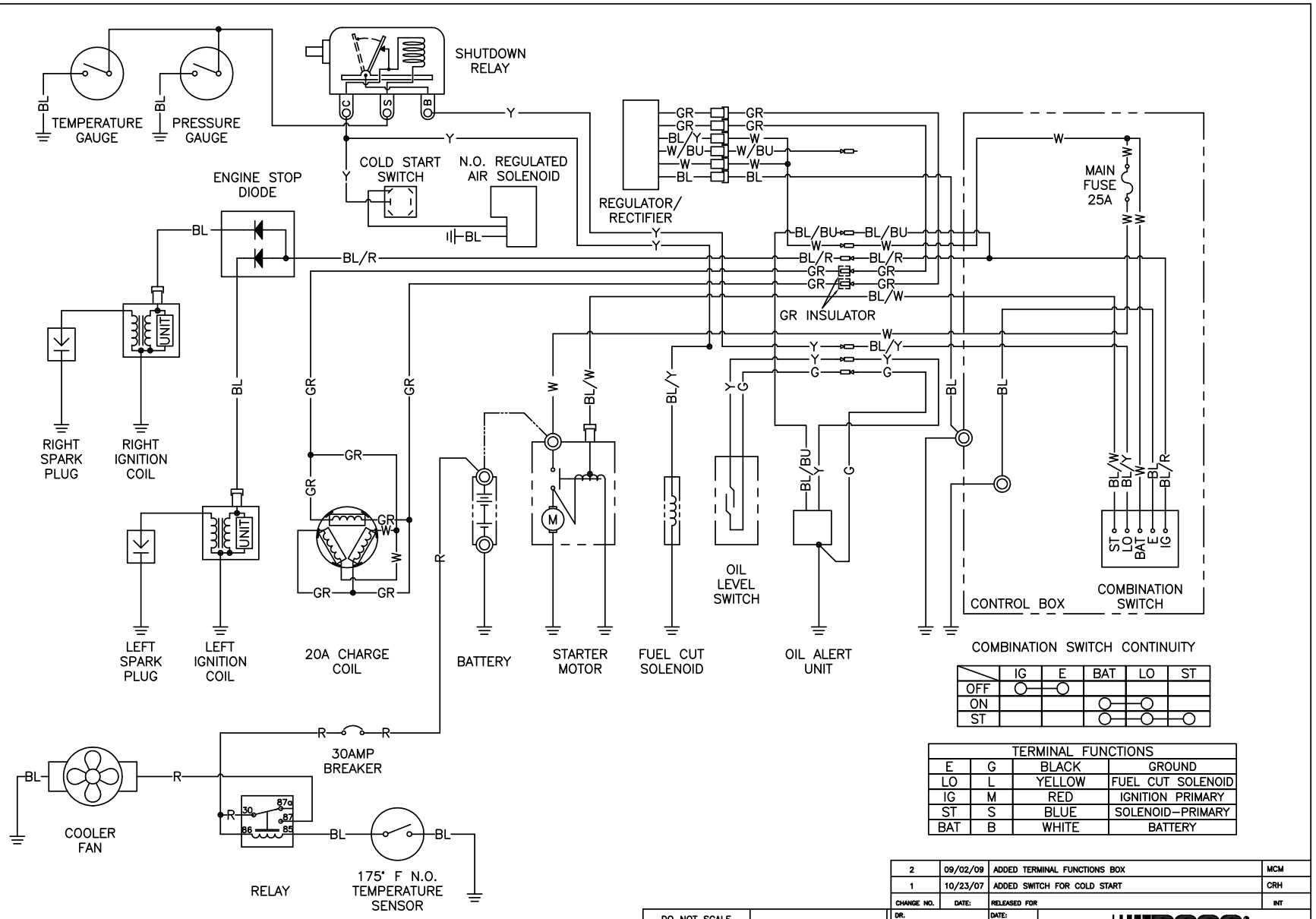
DRAWN	CRH	2/20/2008
CHECKED	NDD	2/20/2008
MATERIAL	N/A	
PATH	G:\Inventor Files\200k\200381.dwg	

BOSS INDUSTRIES
1761 GENESIS DR.
LA PORTE, IN 46350

DESCRIPTION
INST. PANEL & PARTS, 24HP RX70

SIZE	SCALE	DWG NO	REV
C	1=2	200381	3

SHEET 1 OF 1



COMBINATION SWITCH CONTINUITY

	IG	E	BAT	LO	ST
OFF	○	○			
ON			○	○	
ST			○	○	○

TERMINAL FUNCTIONS			
E	G	BLACK	GROUND
LO	L	YELLOW	FUEL CUT SOLENOID
IG	M	RED	IGNITION PRIMARY
ST	S	BLUE	SOLENOID–PRIMARY
BAT	B	WHITE	BATTERY

BL	BLACK	BR	BROWN
Y	YELLOW	O	ORANGE
BU	BLUE	LB	LIGHT BLUE
G	GREEN	LG	LIGHT GREEN
R	RED	P	PINK
W	WHITE	GR	GRAY

CHANGE NO.	DATE:	RELEASED FOR	
2	09/02/09	ADDED TERMINAL FUNCTIONS BOX	MCM
1	10/23/07	ADDED SWITCH FOR COLD START	CRH

DO NOT SCALE

TOLERANCES UNLESS NOTED

MACHINED SURFACES

NOMINAL DIM	
0.000 TO 1.000	±.010
1.001 TO 5.000	±.015
5.001 TO 10.000	±.020
10.001 & OVER	±.025

UNMACHINED SURFACES

FRACTIONAL	±1/16
DECIMAL	±.03
ANGULAR	±1°

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DR.	CRH	5/13/05
CK.		
ENG.	MFP	5/13/05
MAT'L		
HARDNESS		
NEXT ASSY		

BOSS INDUSTRIES, LAPORTE, IN 46350

WIRING DIAGRAM, BOSS RX70 HONDA 20AMP CHARGING

SIZE	CODE IDENT.	DRAWING NO.	REV.
C		304977	2

PATH: G:/Mcad/300K | PLOT SCALE: N/A | SHEET 1 OF 1